# REL
## MID-ATLANTIC
Regional Educational Laboratory
At Pennsylvania State University

# A descriptive analysis of enrollment and achievement among English language learner students in the District of Columbia

ies

NATIONAL CENTER FOR
EDUCATION EVALUATION
AND REGIONAL ASSISTANCE

Institute of Education Sciences

# REL
## MID-ATLANTIC
### Regional Educational Laboratory
### At Pennsylvania State University

# A descriptive analysis of enrollment and achievement among English language learner students in the District of Columbia
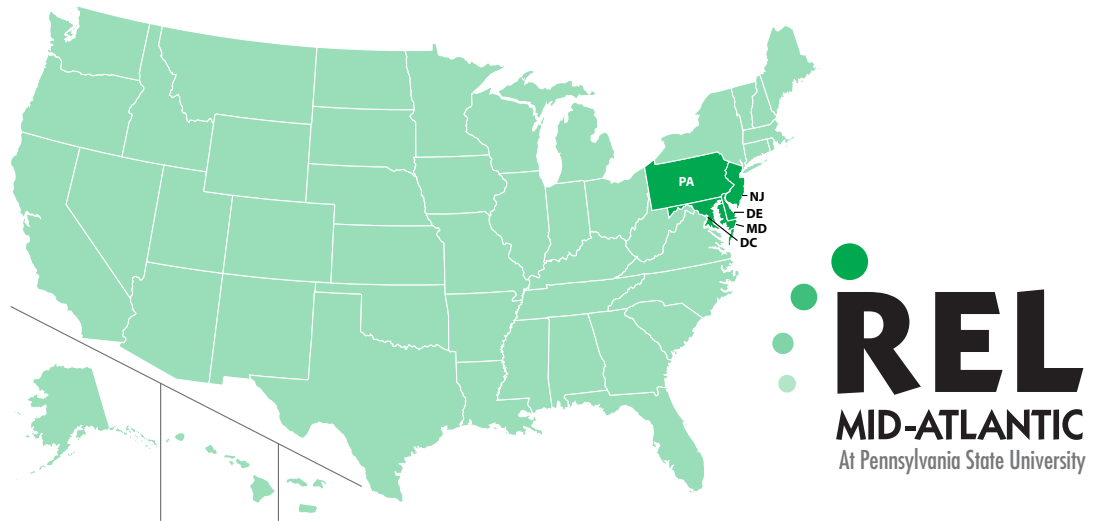
**April 2012**

**Prepared by**

**Rosemarie O'Conner**
**ICF International**

**Jamal Abedi**
**University of California, Davis**

**Stephanie Tung**
**ICF International**

## ies
### NATIONAL CENTER FOR EDUCATION EVALUATION AND REGIONAL ASSISTANCE
#### Institute of Education Sciences

**Issues and Answers** is an ongoing series of reports from short-term Fast Response Projects conducted by the regional educational laboratories on education issues of importance at local, state, and regional levels. Fast Response Project topics change to reflect new issues, as identified through lab outreach and requests for assistance from policymakers and educators at state and local levels and from communities, businesses, parents, families, and youth. All Issues and Answers reports meet Institute of Education Sciences standards for scientifically valid research.

O'Conner, R., Abedi, J., and Tung, S. (2012). *A descriptive analysis of enrollment and achievement among English language learner students in the District of Columbia.* (Issues & Answers Report, REL 2012–No. 131). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Mid-Atlantic. Retrieved from http://ies.ed.gov/ncee/edlabs.

This report is available on the Regional Educational Laboratory website at http://ies.ed.gov/ncee/edlabs.

# A descriptive analysis of enrollment and achievement among English language learner students in the District of Columbia

**This study describes enrollment trends between 2002/03 and 2008/09 and achievement trends between 2006/07 and 2008/09 among English language learner (ELL) students in the District of Columbia. It documents growth in ELL student enrollment and finds that in all years and all grades studied, the performance of ELL students relative to that of non-ELL students was stronger in math than in reading; in many instances, ELL students' performance was higher than that of non-ELL students.**

English language learner (ELL) students are the fastest growing segment of the U.S. student population.[1] According to the National Clearinghouse for English Language Acquisition and Language Instruction Educational Programs (2011), approximately 5.3 million ELL students were enrolled in preK–12 in 2008/09, accounting for about 10.8 percent of public school students in the United States. National enrollment of ELL students in public schools grew 57 percent between 1995 and 2009 (Flannery 2009)—almost six times the 10 percent growth rate in the general education population (students who are not enrolled in a language assistance program or a special education program).

Nationally, an achievement gap exists between ELL and non-ELL students in all subject areas,

particularly subjects with high language demands (Strickland and Alvermann 2004). On state assessments, the percentage of students who achieve proficiency (as defined by each state) is 20–30 percentage points lower among ELL students than among non-ELL students (Abedi and Dietel 2004). The No Child Left Behind Act of 2001 requires states to implement accountability systems to assess the achievement of all students, including students from traditionally underserved populations such as ELL students. The goal is to have all students reach proficiency and to close the achievement gap by 2014 (No Child Left Behind Act of 2001).

This study describes ELL student enrollment trends between 2002/03 and 2008/09 and achievement trends between 2006/07 and 2008/09 in the District of Columbia. Two research questions guide this study:[2]

- How did the enrollment of ELL students in District of Columbia public schools change between 2002/03 and 2008/09?

- How did performance (the percentage scoring at the proficient or advanced level) on district assessments in reading and math in grades 3–8 and 10 compare between ELL and non-ELL students in District of Columbia public schools from 2006/07 to 2008/09?

To report changes in ELL student enrollment and performance, the study uses enrollment and assessment data from the District of Columbia Office of the State Superintendent of Education and the U.S. Department of Education websites. The descriptive analyses of enrollment data track the number of ELL students and the languages spoken by ELL students districtwide. The analyses of performance data present the percentage of ELL and non-ELL students who scored at the proficient or advanced level in reading and math in the district.

The study's main findings include:

On enrollment trends:

- From 2002/03 to 2008/09, ELL student enrollment in District of Columbia public schools increased 1.8 percent, while total enrollment decreased 6.3 percent. ELL student enrollment increased from 7.7 percent of total enrollment in 2002/03 to 8.4 percent in 2008/09.

- From 2005/06 to 2008/09, Spanish speakers accounted for the largest percentage of ELL students, peaking at 74.9 percent in 2005/06.[3] In 2008/09, Spanish (spoken by 60.4 percent of ELL students in the district) had the most speakers, followed by Amharic (2.4 percent), Chinese (2.2 percent), French (1.9 percent), and Vietnamese (1.7 percent). ELL students speaking "other" languages (languages other than the five most common in the district) accounted for 31.5 percent of ELL students in 2008/09.

- From 2005/06 to 2008/09, the number and percentage of ELL students speaking Amharic, French, and "other" languages increased, whereas the number and percentage of ELL students speaking Spanish, Chinese, and Vietnamese decreased.

On achievement trends:

- Between 2006/07 and 2008/09, ELL students' performance in reading increased 1.9–20.5 percentage points in all grades studied (grades 3–8 and 10).

- Between 2006/07 and 2008/09, ELL students' performance in math increased 14.8–24.0 percentage points in all grades studied (grades 3–8 and 10).

- ELL students' performance in grade 3 reading was higher than that of non-ELL students in every year studied. ELL students' performance in grade 4 reading was higher than that of non-ELL students in 2006/07. Non-ELL students' performance in grade 4 reading was higher than that of ELL students in 2007/08 and 2008/09, but the achievement gap did not exceed 0.25 percentage point. From 2006/07 to 2008/09, the achievement gap in reading between ELL and non-ELL students widened in grade 8, narrowed in grades 7 and 10, closed in grade 5, and reversed in grade 6 (with ELL students' performance higher than that of non-ELL students).

- ELL students' performance in math was higher than that of non-ELL students in grades 3 and 4 in every year studied. From 2006/07 to 2008/09, the achievement gap in math between ELL and non-ELL students narrowed in grade 7 and reversed in grades 5, 6, 8, and 10. By 2008/09, ELL

students' performance in math was higher than that of non-ELL students in all grades studied except grade 7.

## Notes

1. The District of Columbia Office of the State Superintendent of Education defines an ELL student as "a linguistically and culturally diverse student with an English language proficiency level that does not allow the student to participate in the general program of the school without alternative language services" (Secretary of the District of Columbia 2002). A linguistically and culturally diverse student is a student who understands or speaks a language other than English that was learned from his or her family background or a student with a family background where a language other than English is spoken in the home (Secretary of the District of Columbia 2002).

2. This report is one of a series for jurisdictions in the Mid-Atlantic Region (which also includes Delaware, Maryland, New Jersey, and Pennsylvania). The findings are presented in separate reports because each jurisdiction has different ELL policies and definitions, and so it may be inappropriate to compare ELL student enrollment and achievement across jurisdictions. The available data also varied by jurisdiction.

3. Data on language groups with the highest ELL student enrollment were not available for 2002/03–2004/05.

**April 2012**

**TABLE OF CONTENTS**

This study describes enrollment trends between 2002/03 and 2008/09 and achievement trends between 2006/07 and 2008/09 among English language learner (ELL) students in the District of Columbia. It documents growth in ELL student enrollment and finds that in all years and all grades studied, the performance of ELL students relative to that of non-ELL students was stronger in math than in reading; in many instances, ELL students' performance was higher than that of non-ELL students.

## WHY THIS STUDY?

English language learner (ELL) students[1] are the fastest growing segment of the student population enrolled in public schools in the United States, including in the District of Columbia. This study describes enrollment trends between 2002/03 and 2008/09 and achievement trends between 2006/07 and 2008/09 among ELL students in District of Columbia public schools. (Box 1 defines key terms.)

### National increase in the number of ELL students

According to the National Clearinghouse for English Language Acquisition and Language Instruction Educational Programs (2011), approximately 5.3 million ELL students were enrolled in preK–12 in 2008/09, accounting for about 10.8 percent of public school students in the United States. National enrollment of ELL students in public schools grew 57 percent between 1995 and 2009 (Flannery 2009)—almost six times the 10 percent growth rate in the general education population (students who are not enrolled in a language assistance program or a special education program).

In the 1990s, the majority of ELL students were concentrated in a few states, including California, Florida, and Texas. Since then, the number of ELL students across the country has risen, with increasing diversity in the languages they speak (Shin and Bruno 2003; Shin and Kominski 2010). The growth in the number of ELL students reflects the growth in the number of foreign-born residents in the United States (Migration Policy Institute 2010). According to the Migration Policy Institute (2010), about 39 million foreign-born residents lived in the United States in 2009, accounting for 12.5 percent of the population. The number of foreign-born residents who obtained permanent legal resident status rose from roughly 841,000 in 2000 to 1,131,000 in 2009, an increase of about 35 percent (U.S. Department of Homeland Security 2010).

BOX 1
**Key terms**

*Achievement gap.* The difference between how well students from minority subgroups, including English language learner (ELL) students and low-income households, perform on standardized tests as compared with their peers (No Child Left Behind Glossary 2001). In this report, the achievement gap is calculated by subtracting the percentage of ELL students at a specific grade level who scored proficient or advanced on the district assessment from the percentage of non-ELL students at the same grade level who scored proficient or advanced on the same assessment. *Narrowing* the achievement gap is when the difference between the percentage of ELL students scoring at the proficient or advanced level and the percentage of non-ELL students scoring at the proficient or advanced level decreases over time. *Closing* the achievement gap is when the difference between the percentage of ELL students scoring at the proficient or advanced level and the percentage of non-ELL students scoring at the proficient or advanced level becomes zero. *Reversing* the achievement gap is when the percentage of ELL students scoring at the proficient or advanced level changes from being lower than to higher than the percentage of non-ELL students scoring at the proficient or advanced level.

*English language learner (ELL) students.* According to the District of Columbia Office of the State Superintendent of Education, "a linguistically and culturally diverse student with an English language proficiency level that does not allow the student to participate in the general program of the school without alternative language services" (Secretary of the District of Columbia 2002). A *linguistically and culturally diverse student* is a student who understands or speaks a language other than English that was learned from his or her family background or a student with a family background where a language other than English is spoken in the home (Secretary of the District of Columbia 2002).

*Foreign born.* Anyone residing in the United States who was not a U.S. citizen at birth, including naturalized citizens, lawful permanent residents, certain legal nonimmigrants (for example, people on student or work visas), people admitted under refugee or asylee status, and people illegally residing in the United States (Migration Policy Institute 2010).

*Non–English language learner (non-ELL) students.* Native speakers of English, those who speak a language other than English at home but are identified as initially fluent speakers of English, and those who were ELL students but have been reclassified as fluent English proficient (Abedi 2004).

*Performance.* In this study, a term used as shorthand for the percentage of students scoring at the proficient or advanced level on the District of Columbia Comprehensive Assessment System.

## The achievement gap between ELL and non-ELL students

Nationally, an achievement gap exists between ELL and non-ELL students (Strickland and Alvermann 2004). On state assessments, the percentage of students who achieve proficiency (as defined by each state) is 20–30 percentage points lower among ELL students than among non-ELL students (Abedi and Dietel 2004). Studies using nationally representative assessment data clearly and consistently show a large achievement gap between ELL and non-ELL students in all subject areas (Abedi and Gándara 2006; Solano-Flores and Trumbull 2003; Wolf et al. 2008).

Recent scores on the National Assessment of Educational Progress (NAEP) illustrate this achievement gap between ELL and non-ELL students in reading and math at all grades tested (figure 1; U.S. Department of Education 2010). On the 2009 NAEP reading assessment, the achievement gap between ELL and non-ELL students was 30 percentage points in grade 4, 31 percentage points in grade 8, and 37 percentage points in grade 12. On the 2009 NAEP math assessment, the achievement gap was 30 percentage points in grades 4 and 8 and 23 percentage points in grade 12.

Other studies have illustrated the widening achievement gap in reading/language arts and math between ELL and non-ELL students at higher

**Percentage of students scoring at or above the proficient level on the 2009 National Assessment of Educational Progress, by grade, subject, and English language learner status**

Percent
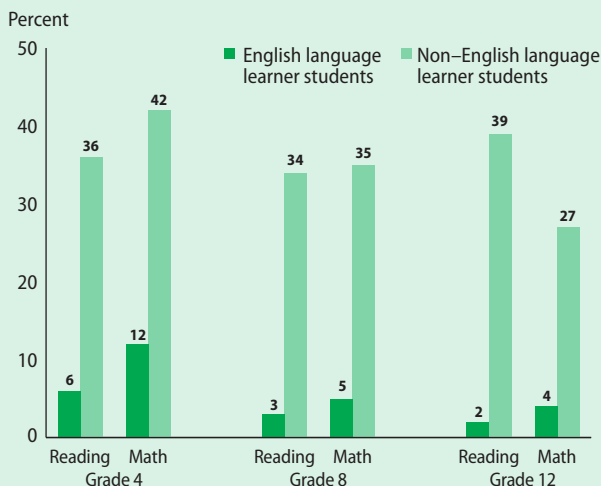


*Source:* Authors' analysis based on data from Authors' analysis based on data from U.S. Department of Education (2010).

grades. National studies using 2005 NAEP math data (Fry 2007) and Stanford 9 reading data (Abedi 2002) found wider gaps between ELL and non-ELL students in middle school and high school than in elementary school. State data yielded similar results: 2001 Stanford 9 reading data for California (Gándara et al. 2003) and 2010 New England Common Assessment Program reading data for Rhode Island (Rhode Island KIDS COUNT 2011). A state-level cohort analysis of a group of California students from 1998 to 2001 found that ELL students' assessment scores tended to be comparable to non-ELL students' scores in the early elementary school grades but fell below non-ELL students' scores by grade 5, and the gap continued to widen throughout the students' school careers (Gándara et al. 2003).

One possible explanation for the change in the achievement gap across grades outlined in the research literature is that the language demand of the assessments increases as grade levels rise. According to the Standards for Educational and Psychological Testing (American Educational Research Association, American Psychological Association, and National Council on Measurement in Education

1999, p. 91), "for all test takers, any test that employs language is, in part, a measure of their language skills. This is of particular concern for test takers whose first language is not the language of the test." The language demands of national and state assessments may affect the academic performance of ELL students with low English proficiency. Thus, these assessments inadvertently become measures of English language proficiency in addition to being measures of content area knowledge and skills.

The achievement gap between ELL and non-ELL students reported in the literature is wider in reading/language arts, which has high language demand, than in subjects such as science and math, where language is not the target of measurement (Abedi 2002; Abedi and Herman 2010). In a study using data from several school districts in different states, Abedi, Leon, and Mirocha (2003) found that the achievement gap between ELL and non-ELL students is widest in reading, substantially narrower in science, and nonexistent in math items involving computations (but not in math items that involve the use of language, such as word problems).

## Legislation affecting the assessment of ELL students

Closing the achievement gap between subgroups such as ELL and non-ELL students is a critical step toward achieving the No Child Left Behind (NCLB) Act of 2001 goal of having all students reach proficiency in reading and math by 2014. The law requires states to implement accountability systems to assess the achievement of all students, including traditionally underserved populations such as ELL students. Under Title I of the NCLB Act, all students, including ELL students, must be tested annually in grades 3–8 and once in high school, and states must provide ELL students with appropriate accommodations, including modifications of the assessment language and format, until the students achieve English language proficiency. Because ELL students are still developing English language skills, state assessments in a non-native language may introduce language that is too complex for a student to understand. In such cases, accommodations may be made during

the assessment to minimize the impact of complex language without giving ELL students an unfair advantage over students who do not receive accommodations (Abedi 2001).

## Regional need for this study

Policymakers in the Mid-Atlantic Region expressed an interest in knowing more about the trends in ELL student enrollment and achievement. In 2009, the Pennsylvania Department of Education made a request to Regional Educational Laboratory (REL) Mid-Atlantic for "a comprehensive demographic analysis of the state's ELL population," including "typical growth trends for this group by language, etc."[2] Also requested was "an analysis on various achievement indicators for ELL students." REL Mid-Atlantic shared this request and its proposed data analysis with other state education agency representatives in the region, which also includes Delaware, the District of Columbia, Maryland, and New Jersey. The director of teacher effectiveness research and evaluation at the District of Columbia Public Schools indicated that she was interested in the study and stated that the District of Columbia Public Schools was in the process of evaluating its ELL programs, and the findings "would nicely complement" what it found.

## Research questions

This study addresses two research questions:

- How did the enrollment of ELL students in District of Columbia public schools change between 2002/03 and 2008/09?

- How did performance (the percentage scoring at the proficient or advanced level) on district assessments in reading and math in grades 3-8 and 10 compare between ELL and non-ELL students in District of Columbia public schools from 2006/07 to 2008/09?

The study data are described in box 2 and in greater detail in appendix A.

## TRENDS IN ENROLLMENT OF ELL STUDENTS

Between 2002/03 and 2008/09, the number of ELL students in the District of Columbia increased 1.8 percent, but the changes were not consistent over time (table 1). ELL student enrollment increased from 2002/03 to 2003/04, when it peaked; decreased from 2003/04 to 2005/06; and increased from

---

BOX 2
**Data sources**

This study draws from student enrollment and assessment data in the District of Columbia. Both sets of data include all public school students in the District of Columbia in grades K–12 (regular and charter schools); students from nonpublic private or parochial schools are not included.

Enrollment data are from annual public school enrollment audit reports on the District of Columbia Office of the State Superintendent of Education website and the Consolidated State Performance Reports on

the U. S. Department of Education website. These data were used to track total and ELL student enrollment and to identify the languages spoken by the highest number of ELL students. ELL student enrollment by grade level was not available on the district website and is not examined in this report. The 2002/03 school year was selected as the base year because it is the first year that states were required to disaggregate and report data on traditionally underserved populations under the No Child Left Behind Act of 2001. The 2008/09 school year was the most recent year for which data were available.

District assessment data were used to track the achievement of ELL and non-ELL students on districtwide reading and math assessments over time. These data—from the District of Columbia Comprehensive Assessment System (DC-CAS)—show changes in achievement for both groups of students.

The DC-CAS reading and math data span 2006/07–2008/09; the DC-CAS adopted new test items and score ranges in 2006/07, so results from 2006/07 onward are not comparable to those prior to 2006/07 because the achievement standards and the tests are not linked. For this reason, 2006/07 was selected as the base year.

TABLE 1

**Total and ELL student enrollment in District of Columbia public schools, 2002/03–2008/09**

| Year | Total enrollment | | ELL student enrollment | | |
|---|---|---|---|---|---|
| | Number | Percent change from the previous year | Number | Percent change from the previous year | Percent of total enrollment |
| 2002/03 | 75,724 | na | 5,833 | na | 7.7 |
| 2003/04 | 75,282 | −0.6 | 6,558 | 12.4 | 8.7 |
| 2004/05 | 74,190 | −1.5 | 5,298 | −19.2 | 7.1 |
| 2005/06 | 72,771 | −1.9 | 4,855 | −8.4 | 6.7 |
| 2006/07 | 72,378 | −0.5 | 5,063 | 4.3 | 7.0 |
| 2007/08 | 71,369 | −1.4 | 5,372 | 6.1 | 7.5 |
| 2008/09 | 70,919 | −0.6 | 5,939 | 10.6 | 8.4 |

na is not applicable.

ELL is English language learner.

*Source:* Authors' analysis based on data from District of Columbia Office of the State Superintendent of Education (2009a).

2005/06 to 2008/09.[3] Total enrollment in the district declined 6.3 percent from 2002/03 to 2008/09. The percentage of ELL students in total enrollment increased from 7.7 percent in 2002/03 to 8.7 percent in 2003/04, declined to 6.7 percent in 2005/06, and steadily increased to 8.4 percent in 2008/09.

From 2005/06 to 2008/09, Spanish speakers accounted for the largest percentage of ELL students,

peaking at 74.9 percent in 2005/06 (table 2). In 2008/09, Spanish (spoken by 60.4 percent of ELL students in the district) had the most speakers, followed by Amharic (2.4 percent), Chinese (2.2 percent), French (1.9 percent), and Vietnamese (1.7 percent). ELL students speaking "other" languages (languages other than the five most common in the district) accounted for 31.5 percent of ELL students in 2008/09, but no language

TABLE 2

**Number and percentage of ELL students in District of Columbia public schools, by native language, 2005/06–2008/09**

| Native language | 2005/06 | | 2006/07 | | 2007/08 | | 2008/09 | |
|---|---|---|---|---|---|---|---|---|
| | Number of ELL students | Percent of the total number of ELL students | Number of ELL students | Percent of the total number of ELL students | Number of ELL students | Percent of the total number of ELL students | Number of ELL students | Percent of the total number of ELL students |
| Spanish | 3,634 | 74.9 | 3,567 | 70.5 | 3,283 | 61.1 | 3,586 | 60.4 |
| Amharic | 112 | 2.3 | 154 | 3.0 | 96 | 1.8 | 142 | 2.4 |
| Chinese | 171 | 3.5 | 147 | 2.9 | 127 | 2.4 | 130 | 2.2 |
| French | 78 | 1.6 | 114 | 2.3 | 94 | 1.8 | 111 | 1.9 |
| Vietnamese | 113 | 2.3 | 109 | 2.2 | 100 | 1.9 | 101 | 1.7 |
| Other | 747 | 15.4 | 972 | 19.2 | 1,672 | 31.1 | 1,869 | 31.5 |
| Total number of ELL students | 4,855 | | 5,063 | | 5,372 | | 5,939 | |

ELL is English language learner.

*Note:* Data on languages with the highest enrollment of ELL students were not available for 2002/03–2004/05. Percentages may not sum to 100 percent because of rounding.

*Source:* Authors' analysis based on data from U.S. Department of Education (2006, 2007, 2008, 2009).

included in that category was spoken by more than 2 percent of ELL students.

The number and percentage of ELL students speaking each language fluctuated between 2005/06 and 2008/09. The number and percentage of ELL students speaking Spanish, Chinese, and Vietnamese decreased between 2005/06 and 2008/09, but the changes were not consistent over time. The number of ELL students speaking Spanish decreased from 2005/06 to 2007/08 and increased from 2007/08 to 2008/09, but the percentage of ELL students speaking Spanish decreased every year, 14.5 percentage points from 2005/06 to 2008/09, with the largest drop from 2006/07 to 2007/08 (9.4 percentage points).[4] A similar trend occurred among ELL students speaking Chinese and Vietnamese.

The number and percentage of ELL students speaking Amharic and French increased from 2005/06 to 2008/09, but the changes were not consistent over time. The number and percentage of ELL students speaking "other" languages increased every year, with the largest increase from 2006/07 to 2007/08. From 2005/06 to 2008/09, the increase in the number of ELL students speaking "other" languages ranged from 197 students (2007/08 to 2008/09) to 700 students (2006/07 to 2007/08). The percentage of ELL students speaking "other" languages increased 16.1 percentage points from 2005/06 to 2008/09, more than doubling the percentage of ELL students speaking "other" languages in 2005/06.[5]

## TRENDS IN ACHIEVEMENT OF ELL STUDENTS

Under Title I of the NCLB Act, all students, including ELL students, are required to participate in their state's annual standards-based assessment program in reading/language arts, math, and as of 2008, science.[6]

The following sections compare the performance (the percentage scoring at the proficient or advanced level) of ELL and non-ELL students on the

District of Columbia Comprehensive Assessment System (DC-CAS; the District of Columbia assessment program is described in box 3). The percentage of students who scored at the proficient or advanced level on each assessment from 2006/07 to 2008/09 is listed in appendix D.

### Reading

*Grade 3.* Overall performance on the grade 3 reading assessment increased from 2006/07 to 2008/09, with larger gains among ELL students than among non-ELL students (figure 2). ELL students' performance was higher than that of non-ELL students across all years studied and increased 4.8 percentage points from 2006/07 to 2008/09, whereas non-ELL students' performance increased 6.1 percentage points from 2006/07 to 2007/08 and decreased 1.8 percentage points from 2007/08 to 2008/09, for a net increase of 4.3 percentage points.

*Grade 4.* In 2006/07, there was no achievement gap on the grade 4 reading assessment,

FIGURE 2

**Percentage of students scoring at the proficient or advanced level on the grade 3 District of Columbia Comprehensive Assessment System in reading, by English language learner status, 2006/07–2008/09**
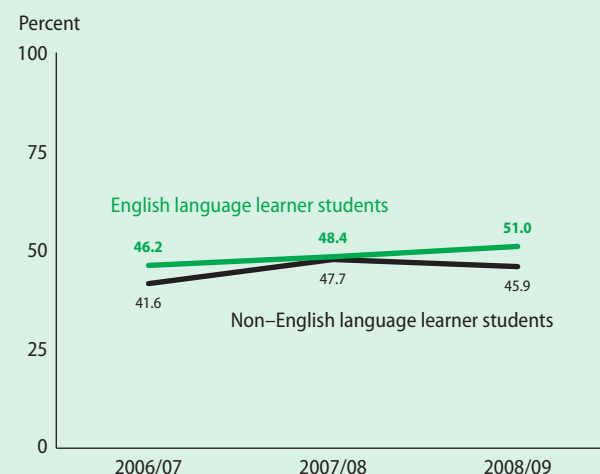


*Note:* For non–English language learner students, *n* = 4,448 in 2006/07, *n* = 4,266 in 2007/08, and *n* = 4,361 in 2008/09. For English language learner students, *n* = 533 in 2006/07, *n* = 516 in 2007/08, and *n* = 758 in 2008/09. Values in bold are those of English language learner students.

*Source:* Authors' analysis based on data from District of Columbia Office of the State Superintendent of Education (2009c).

BOX 3
## District of Columbia assessment program

*Academic achievement assessments.* The District of Columbia Comprehensive Assessment System (DC-CAS) measures academic achievement in reading and math in grades 3–8 and 10. For each assessment, scores in each content area are reported as scale scores (raw scores converted to a common scale that allows numerical comparison of test results over time). The proficiency levels associated with score ranges are below basic, basic, proficient, and advanced.

Scores at the below basic and basic levels are considered below the district minimum of proficiency and indicate a need for additional instructional support. Complete district definitions of the proficiency levels for each assessment are in appendix B, and the score ranges for each proficiency level are in appendix C.

All students in the District of Columbia must take the DC-CAS. The only exception is for English language learner (ELL) students who are in their first year in a U.S. school; they do not have to take the reading assessment, but they must take the math assessment, with accommodations as appropriate.

Two types of accommodations are permitted for ELL students for reading and math assessments:

* Direct linguistic support accommodations involve adjustments to the language of the test (accommodations to simplify, repeat, or clarify). Such accommodations include oral reading of test in English (math only), oral reading of directions, repetition of directions, simplification of oral directions, English dictionary, and bilingual word to word dictionary (math only).

* Indirect linguistic support accommodations involve adjustments to the conditions under which ELL students take the test to help them process language more easily. These accommodations address test schedule and test environment. Such accommodations include extended time on subtests, use of markers to maintain place, test administered at best time of day, breaks between subtests, breaks allowed during subtest, flexible scheduling, test administered over several days, test administered by familiar person, preferential seating, and small group testing.

*English language proficiency assessments.* A home language survey is given to all students. Those who indicate a primary language other than English are given the district English language proficiency test. Based on the results, students are classified as ELL or non-ELL students.

The District of Columbia uses Assessing Comprehension and Communication in English State-to-State for English Language Learners® (ACCESS for ELLs) to assess English language proficiency. ACCESS for ELLs measures ELL students' social and academic English language proficiency in the four language domains: listening, speaking, reading, and writing. Six levels are used to identify the progression of language skills on the path to English language proficiency:

* *Level 1—entering:* knows and uses minimal social language and minimal academic language with visual support.

* *Level 2—beginning:* knows and uses some social English and general academic language with visual support.

* *Level 3—developing:* knows and uses social English and some specific academic language with visual support.

* *Level 4—expanding:* knows and uses social English and some technical academic language.

* *Level 5—bridging:* knows and uses social and academic language working with grade level material.

* *Level 6—reaching:* knows and uses social and academic language at the highest level measured by this test (World-Class Instructional Design and Assessment Consortium 2011).

For K–12 ELL students, an ACCESS for ELLs proficiency level of 5.0 or higher overall composite score is required for exiting a language assistance program.

with ELL students' performance 5.9 percentage points higher than that of non-ELL students, but in 2007/08 and 2008/09, an achievement gap formed, with non-ELL students' performance 0.1–0.2 percentage point higher than that of ELL students (figure 3). Overall performance increased from 2006/07 to 2008/09, with larger gains among non-ELL students than among ELL students. ELL students' performance increased 1.9 percentage points, whereas non-ELL students' performance increased 8.0 percentage points.

*Grade 5.* Although non-ELL students' performance on the grade 5 reading assessment was higher than that of ELL students in 2006/07 and 2007/08, the achievement gap closed in 2008/09 (figure 4). Overall performance increased from 2006/07 to 2008/09, with larger gains among ELL students than among non-ELL students. ELL students' performance increased 14.6 percentage points, whereas non-ELL students' performance increased 8.0 percentage points.

*Grade 6.* The achievement gap on the grade 6 reading assessment between ELL and non-ELL students narrowed from 10.6 percentage points in 2006/07 to 8.1 percentage points in 2007/08 and reversed from 2007/08 to 2008/09, with ELL students' performance 0.5 percentage point higher than that of non-ELL students in 2008/09 (figure 5). Overall performance increased from 2006/07 to 2008/09, with larger gains among ELL students than among non-ELL students. ELL students' performance increased 20.1 percentage points, whereas non-ELL students' performance increased 9.0 percentage points, with the largest gains occurring from 2007/08 to 2008/09.

*Grade 7.* The achievement gap on the grade 7 reading assessment between ELL and non-ELL students narrowed 3.6 percentage points but remained in double digits (figure 6). Overall performance increased from 2006/07 to 2008/09, with non-ELL students' performance higher than that of ELL students in all years. ELL students' performance increased 12.7 percentage points,

FIGURE 3
**Percentage of students scoring at the proficient or advanced level on the grade 4 District of Columbia Comprehensive Assessment System in reading, by English language learner status, 2006/07–2008/09**

Percent

English language learner students
42.9     46.5     45.0
         46.4     44.8
37.0
Non–English language learner students
2006/07     2007/08     2008/09
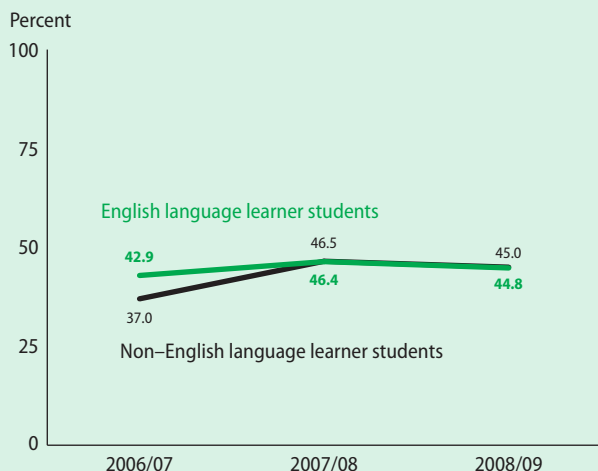
*Note:* For non–English language learner students, *n* = 4,382 in 2006/07, *n* = 4,315 in 2007/08, and *n* = 4,047 in 2008/09. For English language learner students, *n* = 505 in 2006/07, *n* = 500 in 2007/08, and *n* = 572 in 2008/09. Values in bold are those of English language learner students.

*Source:* Authors' analysis based on data from District of Columbia Office of the State Superintendent of Education (2009c).

FIGURE 4
**Percentage of students scoring at the proficient or advanced level on the grade 5 District of Columbia Comprehensive Assessment System in reading, by English language learner status, 2006/07–2008/09**

Percent

Non–English language learner students
         45.5     45.7
37.7              45.7
         43.6
31.1
English language learner students
2006/07     2007/08     2008/09

*Note:* For non–English language learner students, *n* = 4,690 in 2006/07, *n* = 4,317 in 2007/08, and *n* = 4,251 in 2008/09. For English language learner students, *n* = 423 in 2006/07, *n* = 399 in 2007/08, and *n* = 519 in 2008/09. Values in bold are those of English language learner students.

*Source:* Authors' analysis based on data from District of Columbia Office of the State Superintendent of Education (2009c).

FIGURE 5

**Percentage of students scoring at the proficient or advanced level on the grade 6 District of Columbia Comprehensive Assessment System in reading, by English language learner status, 2006/07–2008/09**

Percent



*Note:* For non–English language learner students, *n* = 4,601 in 2006/07, *n* = 4,529 in 2007/08, and *n* = 4,143 in 2008/09. For English language learner students, *n* = 281 in 2006/07, *n* = 308 in 2007/08, and *n* = 395 in 2008/09. Values in bold are those of English language learner students.

*Source:* Authors' analysis based on data from District of Columbia Office of the State Superintendent of Education (2009c).

FIGURE 6

**Percentage of students scoring at the proficient or advanced level on the grade 7 District of Columbia Comprehensive Assessment System in reading, by English language learner status, 2006/07–2008/09**

Percent
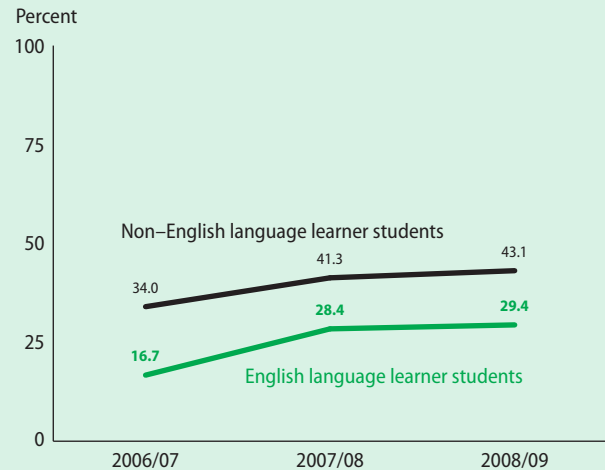


*Note:* For non–English language learner students, *n* = 4,976 in 2006/07, *n* = 4,436 in 2007/08, and *n* = 4,326 in 2008/09. For English language learner students, *n* = 289 in 2006/07, *n* = 263 in 2007/08, and *n* = 330 in 2008/09. Values in bold are those of English language learner students.

*Source:* Authors' analysis based on data from District of Columbia Office of the State Superintendent of Education (2009c).

whereas non-ELL students' performance increased 9.1 percentage points.

*Grade 8.* Overall performance on the grade 8 reading assessment increased from 2006/07 to 2008/09, but the achievement gap between ELL and non-ELL students widened 1.9 percentage points, from 11.5 percentage points in 2006/07 to 13.4 in 2008/09 (figure 7). ELL students' performance increased 11.8 percentage points, whereas non-ELL students' performance increased 13.7 percentage points.

*Grade 10.* The achievement gap on the grade 10 reading assessment between ELL and non-ELL students narrowed 13.3 percentage points, from 14.4 percentage points in 2006/07 to 1.1 in 2008/09 (figure 8). Overall performance increased from 2006/07 to 2008/09, with larger gains among ELL students than among non-ELL students. ELL students' performance increased 20.5 percentage points, whereas non-ELL students' performance increased 7.2 percentage points.

FIGURE 7

**Percentage of students scoring at the proficient or advanced level on the grade 8 District of Columbia Comprehensive Assessment System in reading, by English language learner status, 2006/07–2008/09**

Percent



*Note:* For non–English language learner students, *n* = 4,848 in 2006/07, *n* = 4,788 in 2007/08, and *n* = 4,253 in 2008/09. For English language learner students, *n* = 258 in 2006/07, *n* = 283 in 2007/08, and *n* = 300 in 2008/09. Values in bold are those of English language learner students.

*Source:* Authors' analysis based on data from District of Columbia Office of the State Superintendent of Education (2009c).
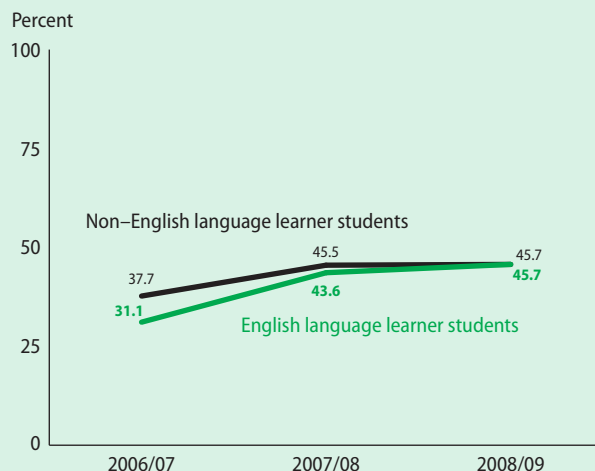
FIGURE 8

**Percentage of students scoring at the proficient or advanced level on the grade 10 District of Columbia Comprehensive Assessment System in reading, by English language learner status, 2006/07–2008/09**
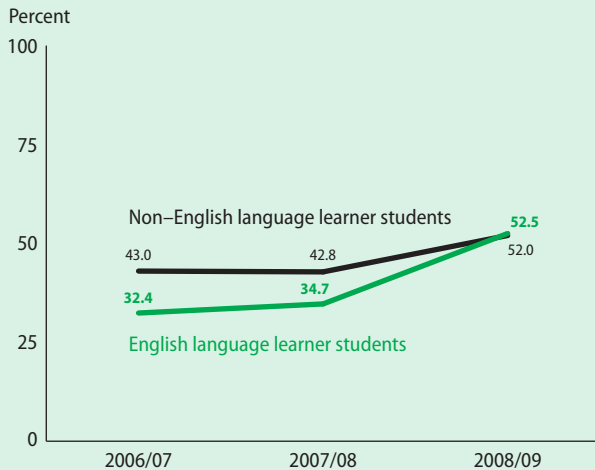
Percent



*Note:* For non–English language learner students, *n* = 3,866 in 2006/07, *n* = 3,690 in 2007/08, and *n* = 3,404 in 2008/09. For English language learner students, *n* = 228 in 2006/07, *n* = 192 in 2007/08, and *n* = 249 in 2008/09. Values in bold are those of English language learner students.

*Source:* Authors' analysis based on data from District of Columbia Office of the State Superintendent of Education (2009c).

TABLE 3

**Achievement gap on the District of Columbia Comprehensive Assessment System in reading between ELL and non-ELL students, by grade, 2006/07–2008/09**

| Grade | 2006/07 | 2007/08 | 2008/09 | Average across years studied |
|---|---|---|---|---|
| 3 | −4.6 | −0.7 | −5.1 | −3.5 |
| 4 | −5.9 | 0.1 | 0.2 | −1.9 |
| 5 | 6.6 | 1.9 | 0.0 | 2.8 |
| 6 | 10.6 | 8.1 | −0.5 | 6.1 |
| 7 | 17.3 | 12.9 | 13.7 | 14.6 |
| 8 | 11.5 | 19.3 | 13.4 | 14.7 |
| 10 | 14.4 | 13.9 | 1.1 | 9.8 |

*Note:* The achievement gap was calculated by subtracting the percentage of ELL students scoring at the proficient or advanced level from that of non-ELL students. A negative value indicates that the percentage of students who scored at the proficient or advanced level was higher among ELL students than among non-ELL students.

*Source:* Authors' analysis based on data from District of Columbia Office of the State Superintendent of Education (2009c).

*Summary of achievement gaps.* From 2006/07 to 2008/09, the achievement gap in reading between ELL and non-ELL students exhibited a variety of different patterns by grade (table 3). In grade 3, ELL students' performance was higher than that of non-ELL students in every year. In grade 4, ELL students' performance was higher than that of non-ELL students in 2006/07 but fell below in 2007/08, leaving an achievement gap of 0.1–0.2 percentage point in 2007/08 and 2008/09. In grades 5, 6, and 10, non-ELL students' performance was higher than that of ELL students, but the achievement gap decreased each year from 2006/07 to 2008/09. By 2008/09, the achievement gap between ELL and non-ELL students was closed in grade 5, was reversed in grade 6, and was 1.1 percentage points in grade 10. In grade 7, the double digit achievement gap narrowed between 2006/07 and 2008/09, but in grade 8, the double digit achievement gap widened.

Across the period studied, gains in reading were greater among ELL students than among non-ELL students in grades 3, 5, 6, 7, and 10. The average achievement gap between ELL and non-ELL students was narrower in grades 3–5 than in grades 6–8 and 10. By 2008/09, the achievement gap was 0.2 percentage point in grade 4, 13–14 percentage points in grades 7 and 8, and 1.1 percentage points in grade 10, and the achievement gap was closed in grade 5 and reversed in grade 6. In grade 3, ELL students' performance was higher than that of non-ELL students in all years studied.

## Math

*Grade 3.* Overall performance on the grade 3 math assessment increased from 2006/07 to 2008/09, with larger gains among ELL students than among non-ELL students (figure 9). ELL students' performance was higher than that of non-ELL students across all years studied and increased 14.8 percentage points, whereas non-ELL students' performance increased 12.7 percentage points. As a result, the difference between ELL and non-ELL students fell from 9.6 percentage points in 2006/07 to 2.2 in 2007/08 and then grew to 11.7 in 2008/09.

*Grade 4.* Overall performance on the grade 4 math assessment increased from 2006/07 to 2008/09,

FIGURE 9

**Percentage of students scoring at the proficient or advanced level on the grade 3 District of Columbia Comprehensive Assessment System in math, by English language learner status, 2006/07–2008/09**

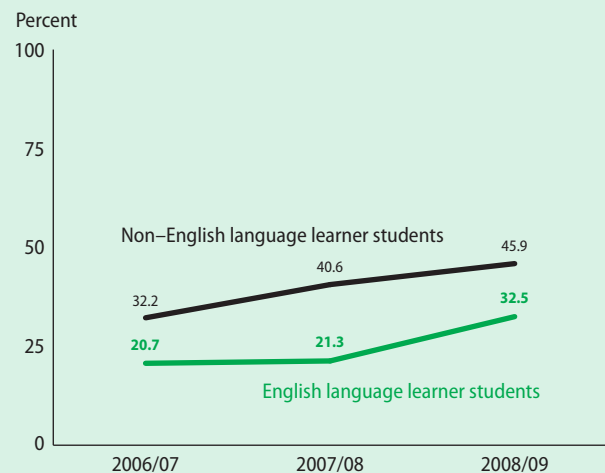Percent
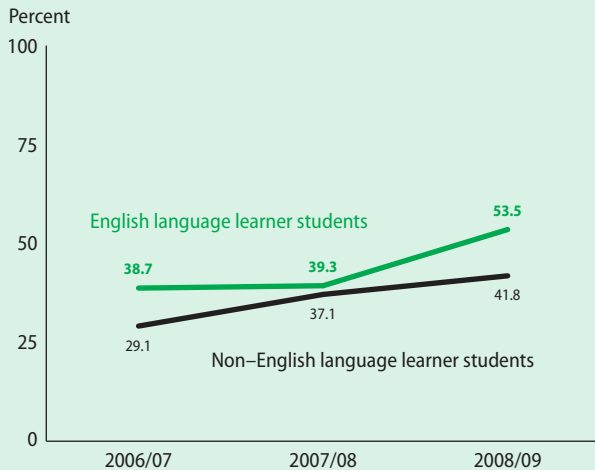


*Note:* For non–English language learner students, *n* = 4,443 in 2006/07, *n* = 4,263 in 2007/08, and *n* = 4,360 in 2008/09. For English language learner students, *n* = 534 in 2006/07, *n* = 516 in 2007/08, and *n* = 758 in 2008/09. Values in bold are those of English language learner students.

*Source:* Authors' analysis based on data from District of Columbia Office of the State Superintendent of Education (2009c).

FIGURE 10

**Percentage of students scoring at the proficient or advanced level on the grade 4 District of Columbia Comprehensive Assessment System in math, by English language learner status, 2006/07–2008/09**
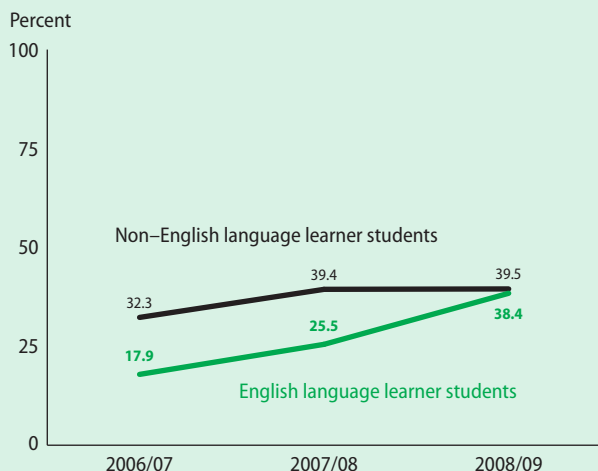
Percent



*Note:* For non–English language learner students, *n* = 4,384 in 2006/07, *n* = 4,313 in 2007/08, and *n* = 4,050 in 2008/09. For English language learner students, *n* = 500 in 2006/07, *n* = 501 in 2007/08, and *n* = 571 in 2008/09. Values in bold are those of English language learner students.

*Source:* Authors' analysis based on data from District of Columbia Office of the State Superintendent of Education (2009c).

with ELL students' performance higher than that of non-ELL students by an increasing margin over time (figure 10). ELL students' performance increased 17.0 percentage points, whereas non-ELL students' performance increased 14.0 percentage points. As a result, the difference between ELL and non-ELL students grew 3.0 percentage points, from 7.2 percentage points in 2006/07 to 10.2 in 2008/09.

*Grade 5.* In 2006/07 and 2007/08, non-ELL students' performance on the grade 5 math assessment was 0.5–1.7 percentage points higher than that of ELL students, but from 2007/08 to 2008/09, the achievement gap reversed, with ELL students' performance 6.3 percentage points higher than that of non-ELL students (figure 11). Overall performance increased from 2006/07 to 2008/09, with larger gains among ELL students than among non-ELL students. From 2006/07 to 2008/09, ELL students' performance increased 21.0 percentage points, whereas non-ELL students' performance increased 14.2 percentage points.

FIGURE 11

**Percentage of students scoring at the proficient or advanced level on the grade 5 District of Columbia Comprehensive Assessment System in math, by English language learner status, 2006/07–2008/09**

Percent



*Note:* For non–English language learner students, *n* = 4,625 in 2006/07, *n* = 4,316 in 2007/08, and *n* = 4,252 in 2008/09. For English language learner students, *n* = 424 in 2006/07, *n* = 400 in 2007/08, and *n* = 520 in 2008/09. Values in bold are those of English language learner students.

*Source:* Authors' analysis based on data from District of Columbia Office of the State Superintendent of Education (2009c).

*Grade 6.* In 2006/07 and 2007/08, non-ELL students' performance on the grade 6 math assessment was higher than that of ELL students, but the achievement gap reversed from 2007/08 to 2008/09 (figure 12). Overall performance increased from 2006/07 to 2008/09, with larger gains among ELL students than among non-ELL students. From 2006/07 to 2008/09, ELL students' performance increased 16.7 percentage points, whereas non-ELL students' performance increased 11.9 percentage points.

*Grade 7.* The achievement gap on the grade 7 math assessment between ELL and non-ELL students narrowed 7.1 percentage points, from 11.8 percentage points in 2006/07 to 4.7 in 2008/09 (figure 13). Overall performance increased from 2006/07 to 2008/09, with non-ELL students' performance higher than that of ELL students in all years. ELL students' performance increased 24.0 percentage points, whereas non-ELL students' performance increased 16.9 percentage points.

*Grade 8.* The achievement gap on the grade 8 math assessment between ELL and non-ELL students narrowed from 6.7 percentage points in 2006/07 to 6.3 percentage points in 2007/08 and reversed from 2007/08 to 2008/09, with ELL students' performance 4.2 percentage points higher than that of non-ELL students (figure 14). Overall performance increased from 2006/07 to 2008/09, with larger gains among ELL students than among non-ELL students. ELL students' performance increased 20.1 percentage points, whereas non-ELL students' performance increased 9.2 percentage points.

*Grade 10.* The achievement gap on the grade 10 math assessment between ELL and non-ELL students was 1.9 percentage points in 2006/07 but reversed from 2006/07 to 2007/08, with ELL students' performance 9.7 percentage points higher than that of non-ELL peers by 2008/09 (figure 15). Overall performance increased from 2006/07 to 2008/09, with larger gains among ELL students than among non-ELL students. ELL students' performance increased 21.6 percentage points,

FIGURE 12

**Percentage of students scoring at the proficient or advanced level on the grade 6 District of Columbia Comprehensive Assessment System in math, by English language learner status, 2006/07–2008/09**
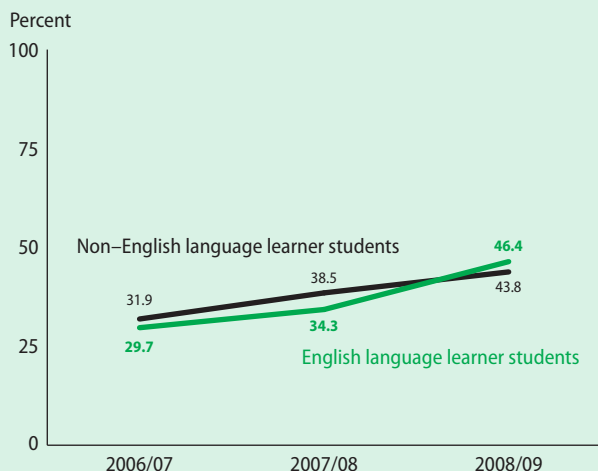
*Note:* For non–English language learner students, *n* = 4,594 in 2006/07, *n* = 4,444 in 2007/08, and *n* = 4,140 in 2008/09. For English language learner students, *n* = 280 in 2006/07, *n* = 309 in 2007/08, and *n* = 396 in 2008/09. Values in bold are those of English language learner students.
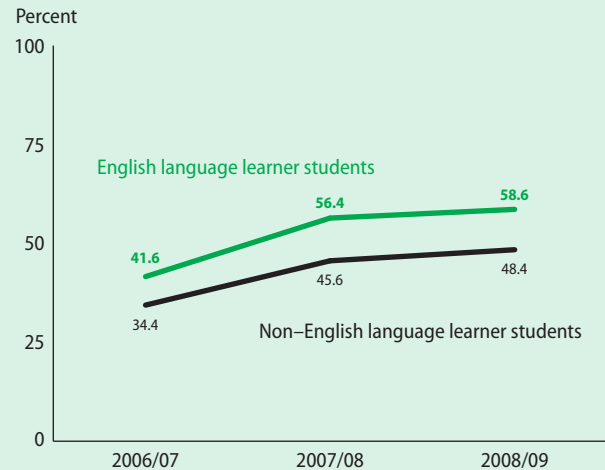
*Source:* Authors' analysis based on data from District of Columbia Office of the State Superintendent of Education (2009c).

FIGURE 13

**Percentage of students scoring at the proficient or advanced level on the grade 7 District of Columbia Comprehensive Assessment System in math, by English language learner status, 2006/07–2008/09**
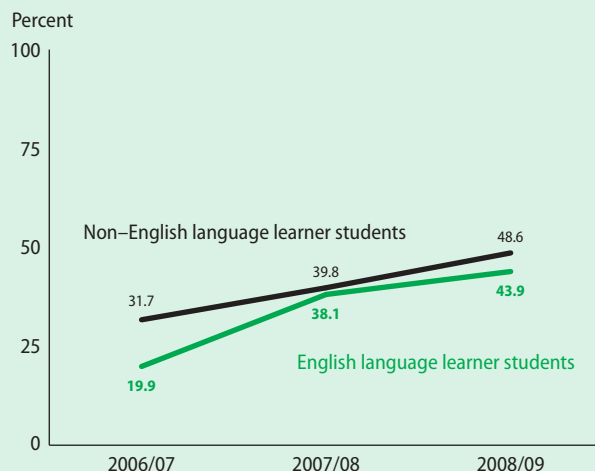
*Note:* For non–English language learner students, *n* = 4,956 in 2006/07, *n* = 4,436 in 2007/08, and *n* = 4,317 in 2008/09. For English language learner students, *n* = 291 in 2006/07, *n* = 263 in 2007/08, and *n* = 330 in 2008/09. Values in bold are those of English language learner students.

*Source:* Authors' analysis based on data from District of Columbia Office of the State Superintendent of Education (2009c).

FIGURE 14

**Percentage of students scoring at the proficient or advanced level on the grade 8 District of Columbia Comprehensive Assessment System in math, by English language learner status, 2006/07–2008/09**
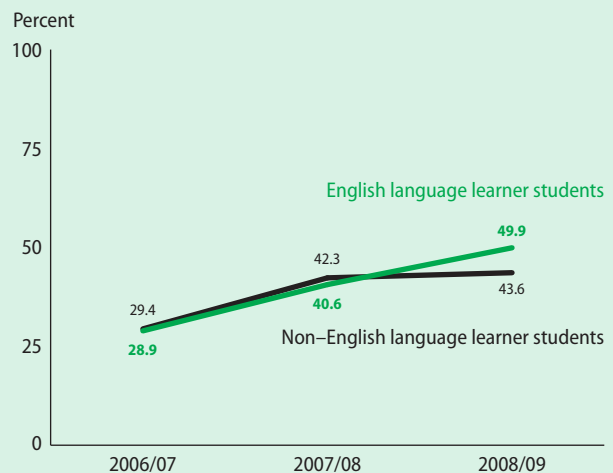
Percent
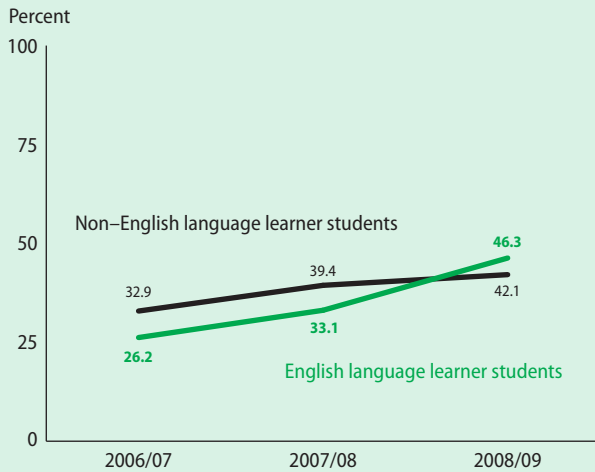


*Note:* For non–English language learner students, $n = 4,808$ in 2006/07, $n = 4,788$ in 2007/08, and $n = 4,244$ in 2008/09. For English language learner students, $n = 258$ in 2006/07, $n = 282$ in 2007/08, and $n = 301$ in 2008/09. Values in bold are those of English language learner students.

*Source:* Authors' analysis based on data from District of Columbia Office of the State Superintendent of Education (2009c).

FIGURE 15

**Percentage of students scoring at the proficient or advanced level on the grade 10 District of Columbia Comprehensive Assessment System in math, by English language learner status, 2006/07–2008/09**

Percent
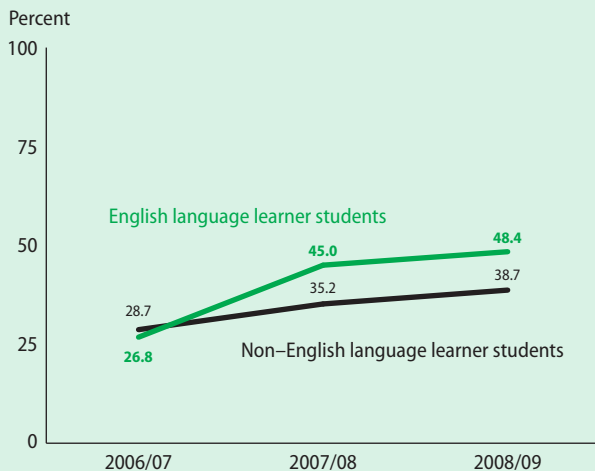


*Note:* For non–English language learner students, $n = 3,806$ in 2006/07, $n = 3,688$ in 2007/08, and $n = 3,401$ in 2008/09. For English language learner students, $n = 223$ in 2006/07, $n = 190$ in 2007/08, and $n = 248$ in 2008/09. Values in bold are those of English language learner students.

*Source:* Authors' analysis based on data from District of Columbia Office of the State Superintendent of Education (2009c).

whereas non-ELL students' performance increased 10.0 percentage points.

*Summary of achievement gaps.* From 2006/07 to 2008/09, in every grade except grade 7, ELL students' performance was higher than that of non-ELL students in at least one year (table 4). By 2008/09, in all grades except grade 7, ELL students' performance was higher than that of non-ELL students. In grades 3 and 4, ELL students' performance was higher than that of non-ELL students in every year studied. Between 2006/07 and 2008/09, the achievement gap in math between ELL and non-ELL students reversed in grades 5, 6, 8, and 10 and narrowed in grade 7. In grades 5 and 6, the achievement gap widened from 2006/07 to 2007/08 and reversed from 2007/08 to 2008/09. In grade 7, the achievement gap narrowed and then widened, ending the period studied narrower overall. In grade 8, the achievement gap narrowed from 2006/07 to 2007/08 and reversed from 2007/08 to 2008/09. In grade 10 the achievement gap reversed from 2006/07 to 2007/08, and ELL students' performance remained higher than that of non-ELL students in 2008/09.

TABLE 4

**Achievement gap on the District of Columbia Comprehensive Assessment System in math between ELL and non-ELL students, by grade, 2006/07–2008/09**

| Grade | 2006/07 | 2007/08 | 2008/09 | Average across years studied |
|-------|---------|---------|---------|------------------------------|
| 3 | –9.6 | –2.2 | –11.7 | –7.8 |
| 4 | –7.2 | –10.8 | –10.2 | –9.4 |
| 5 | 0.5 | 1.7 | –6.3 | –1.4 |
| 6 | 2.2 | 4.2 | –2.6 | 1.3 |
| 7 | 11.8 | 1.7 | 4.7 | 6.1 |
| 8 | 6.7 | 6.3 | –4.2 | 2.9 |
| 10 | 1.9 | –9.8 | –9.7 | –5.9 |

*Note:* The achievement gap was calculated by subtracting the percentage of ELL students scoring at the proficient or advanced level from that of non-ELL students. A negative value indicates that the percentage of students who scored at the proficient or advanced level was higher among ELL students than among non-ELL students.

*Source:* Authors' analysis based on data from District of Columbia Office of the State Superintendent of Education (2009c).

TABLE 5

**Average achievement gap on the District of Columbia Comprehensive Assessment System between ELL and non-ELL students, by subject and grade, 2006/07–2008/09**

| Grade | Reading | Math |
|-------|---------|------|
| 3 | –3.5 | –7.8 |
| 4 | –1.9 | –9.4 |
| 5 | 2.8 | –1.4 |
| 6 | 6.1 | 1.3 |
| 7 | 14.6 | 6.1 |
| 8 | 14.7 | 2.9 |
| 10 | 9.8 | –5.9 |

*Note:* The achievement gap was calculated by subtracting the percentage of ELL students scoring at the proficient or advanced level from that of non-ELL students. A negative value indicates that the percentage of students who scored at the proficient or advanced level was higher among ELL students than among non-ELL students.

*Source:* Authors' analysis based on data from District of Columbia Office of the State Superintendent of Education (2009c).

## Summary of achievement gaps across content areas

Across the period studied and in every grade studied, the performance of ELL students relative to non-ELL students was stronger in math than in reading (table 5). ELL students' performance was higher than that of non-ELL students in both reading and math in grades 3 and 4 and in math in grades 5 and 10. For grades 5–8 and 10, the average achievement gap in reading was widest in grades 7 and 8 and narrowest in grade 5. For grades 6–8, the average achievement gap in math was widest in grade 7 and narrowest in grade 6.

## STUDY LIMITATIONS

This study has several limitations:

- This study is purely descriptive. It does not explain changes in proficiency rates or the achievement gap between ELL and non-ELL students.

- The study used cross-sectional district-level data, not longitudinal student-level data. Therefore, data trends represent different students across time as opposed to longitudinal trends of the same students.

- ELL student enrollment data by grade level were not available. Such data would have indicated whether ELL student enrollment changed progressively by grade, allowing exploration of the extent to which growth in the ELL student population can be attributed to earlier versus later grades.

- The study reports scores for ELL and non-ELL students from 2006/07 to 2008/09. Reading and math assessment scores from 2006/07 onward are not comparable to those prior to 2006/07 because of new test items and score ranges. Thus, reading and math assessment data prior to 2006/07 are not included in the trend analyses.

- Data on ELL student achievement on the District of Columbia English language proficiency assessment were not available. Such data would have provided insight into ELL students' English proficiency levels. In 2008/09, ELL students' performance was higher than that of non-ELL students in math in all grades except grade 7. It is unknown whether the ELL students were classified at the higher levels of English language proficiency. Research indicates that English language proficiency is positively associated with academic achievement (Beal, Adams, and Cohen 2010; Garcia-Vazquez et al. 1997; Genesee et al. 2005).

- Data on accommodations for ELL students were unavailable. Some of the accommodations used by the District of Columbia, such as additional time to take the assessments, might have affected the comparability of assessment outcomes for ELL and non-ELL students (Durán 2008).

## CONCLUSION

Districtwide ELL student enrollment data illustrate the changing demographics of the District of Columbia's student population from 2002/03 to 2008/09. Although total enrollment decreased across the district, ELL student enrollment increased. From 2005/06 to 2008/09, Spanish speakers accounted for the largest percentage of ELL students.

The assessment data from the District of Columbia Office of the State Superintendent of Education indicate that, for students enrolled in public schools from 2006/07 to 2008/09, ELL students' performance in reading and math increased in all grades studied (grades 3–8 and 10). By 2008/09, ELL students' performance in reading was higher than that of non-ELL students in grades 3 and 6. Across the period studied, the achievement gap in reading narrowed in grades 7 and 10 and closed in grade 5. By 2008/09, ELL students' performance in math was higher than that of non-ELL students in grades 3–6, 8, and 10. Across the years studied, the achievement gap in math narrowed in grades 5–8 and 10. In grade 3 reading and math and grade 4 math, no achievement gap existed during the years studied because ELL students' performance was higher than that of non-ELL students.

Across the period studied and in every grade studied, the performance of ELL students relative to non-ELL students was stronger in math than in reading. This is consistent with the research literature showing that the achievement gap between ELL and non-ELL students is widest in reading/language arts, because those assessments have test items with high language demand, and narrowest in content areas such as math, where language is not the target of measurement (Abedi 2002). Abedi, Leon, and Mirocha (2003) found that the achievement gap between ELL and non-ELL students is widest in reading and becomes nonexistent in math items, particularly those involving computations.

The most notable finding from the present study is that ELL students' performance was higher than that of non-ELL students in math in all but one grade and that ELL students' performance was higher than that of non-ELL students in reading in two grades. The research literature offers no instances of such an outcome in elementary, middle, or high school.

A possible explanation for the lack of achievement gap in some grades in reading and in most grades in math is the type and number of accommodations that may have been allowed during testing. As previously mentioned, ELL students can have direct and indirect accommodations on all assessments (reading and math). According to a 2009 study commissioned by the District of Columbia Office of the State Superintendent of Education to evaluate accommodations provided to students with disabilities and ELL students, students received, on average, three to four accommodations. The report also found that the "implementation of accommodations greatly affects the impact of accommodations on scores" (District of Columbia Office of the State Superintendent of Education 2009c, p. 1). Without access to data on accommodations for ELL students, it is unknown whether the type or number of accommodations used may have contributed to this anomaly.

An alternate explanation for the lack of achievement gap is the nature of the District of Columbia public school system. It is the only state system that consists entirely of central city urban schools. Given that an urban district such as the District of Columbia may have high percentages of its entire student population categorized as at risk (Aud et al. 2010), it may be that high percentages of non-ELL high-risk students are equally or more challenged than are ELL students.

> **ELL students' performance was higher than that of non-ELL students in math in all but one grade, and ELL students' performance was higher than that of non-ELL students in reading in two grades**

## APPENDIX A
## DATA AND METHODOLOGY

This appendix describes the data and methodology used in this study.

### Data

This study uses both enrollment and assessment data.

*Enrollment data.* Enrollment data on English language learner (ELL) students in the District of Columbia were accessed from annual public school enrollment audit reports on the District of Columbia Office of the State Superintendent of Education website (total and ELL student enrollment for 2002/03–2008/09) and from consolidated state performance reports on the U.S. Department of Education website (languages with the highest ELL student enrollment for 2005/06–2008/09).

Data on ELL student enrollment by grade level were not available through the District of Columbia Office of the State Superintendent of Education website and are thus not examined in this report. The 2002/03 school year was selected as the base year because it was the first year that states were required to disaggregate and report data on traditionally underserved populations under the No Child Left Behind (NCLB) Act of 2001.

The enrollment data include information from all public elementary, middle, and high schools, which includes District of Columbia public schools, Board of Education charter schools, and public charter schools. Enrollment data do not include information from nonpublic private or parochial schools.

*Assessment data.* Assessment data from the District of Columbia Comprehensive Assessment System (DC-CAS) were accessed through the District of Columbia Office of the State Superintendent of Education website (assessment and accountability data reports on the DC-CAS in reading and math in grades 3–8 and 10 for 2006/07–2008/09).

In 2006/07, the DC-CAS in reading and math adopted new test items and score ranges, so results from 2006/07 onward are not comparable to results prior to 2006/07 because the performance standards and the tests are not linked. Thus, 2006/07 was selected as a base year.

As with the enrollment data, the assessment data include information from all public elementary, middle, and high schools, which includes data from District of Columbia public schools, Board of Education charter schools, and public charter schools. Assessment data do not include information from nonpublic private or parochial schools.

### Methodology

Descriptive analyses were conducted on the enrollment and assessment data. For the enrollment data, the growth of the ELL student population (as a percentage of total enrollment) was tracked across time. In addition, the languages spoken by the highest number of ELL students were presented.

Assessment data were used to present the academic achievement of ELL and non-ELL students on the reading and math assessment across time. The percentage of ELL and non-ELL students who scored at the proficient or advanced level (referred to as "performance" in the analysis) was used to measure student achievement, because that is what the District of Columbia uses to measure accountability for the NCLB Act.[7] No tests of statistical significance were conducted between ELL and non-ELL students.

## APPENDIX B
## PERFORMANCE-LEVEL DESCRIPTIONS OF THE DISTRICT OF COLUMBIA COMPREHENSIVE ASSESSMENT SYSTEM

This appendix presents the knowledge and skills required for each performance level on the District of Columbia Comprehensive Assessment System.

TABLE B1

**Performance-level descriptors for the District of Columbia Comprehensive Assessment System in reading, by grade**

| Grade | Below basic | Basic | Proficient | Advanced |
|---|---|---|---|---|
| 3 | Students are able to use vocabulary skills, such as identifying literal or common meanings of words and phrases, sometimes using context clues. Students are able to read some grade 3 informational and literary texts and can identify a main idea, make some meaning of text features and graphics, form questions, locate text details, and identify simple relationships (for example, cause and effect) in texts. | Students are able to use vocabulary skills, such as identifying words with prefixes and suffixes and distinguishing between literal and nonliteral meanings of some common words and phrases. Students are able to read some grade 3 informational and literary texts and can identify main points and some supporting facts, locate stated facts and specific information in graphics, form questions, identify lessons in a text, make simple connections within and between texts, describe and compare characters, and make simple interpretations. | Students are able to use vocabulary skills, such as identifying affixes and root words and using context clues to interpret nonliteral words and meanings of unknown words. Students are able to read grade 3 informational and literary texts and can distinguish between stated and implied facts and cause and effect relationships, determine and synthesize steps in a process, connect procedures to real-life situations, explain key ideas in stories, explain relationships among characters, identify subtle personality traits of characters, and connect story details to prior knowledge. | Students are able to use vocabulary skills, such as identifying the figurative meanings or nonliteral meanings of some words and phrases in a moderately complex text. Students are able to read grade 3 informational and literary texts and summarize the information or story with supporting details, apply text information to graphics, identify and explain relationships of facts and cause and effect relationships, use text features to make predictions, distinguish between fact and fiction, identify a speaker in a poem or narrator in a story, explain key ideas with supporting details, use context to interpret simple figurative language, and determine simple patterns in poetry. |
| 4 | Students are able to use vocabulary skills, such as determining the meaning of multiple-meaning words (for example, sentence, wind) in text. Students are able to read some grade 4 informational and literary texts and can make a minimal comparison of two ideas, identify cause and effect relationships, locate details, draw simple conclusions, connect some prior knowledge to text, and identify characters' feelings, key events, and a simple summary of a narrative. | Students are able to use vocabulary skills, such as using context clues to determine meanings of words. Students are able to read some grade 4 informational and literary texts and can identify the purpose and main points and summarize them with supporting details, distinguish fact from opinion, identify common topics of poems or stories, explain the influence of setting in a story, use text details to describe characters' traits and relationships, explain cause and effect, and determine lessons in literary text. | Students are able to use vocabulary skills, such as using word roots, affixes, and etymology to determine meanings of words. Students are able to read grade 4 informational and literary texts and can paraphrase information, use prior knowledge to aid interpretation, connect information to real-life situations, make and support comparisons of ideas, explain how characters influence events, explain the effect of a poem's structure, interpret authors' statements, determine theme and compare moral lessons, make distinctions among genre types, and make inferences about authors' lives and purposes based on text, characters, and events. | Students are able to use vocabulary skills, such as using affixes to alter meanings of words, using context to determine meanings of root words, interpreting figurative language, and determining synonyms of multiple-meaning words. Students are able to read grade 4 informational and literary texts and can draw conclusions about implied similarities, explain implied causes and their effects, explain narrative text elements, interpret morals and relate them to real-life situations, interpret figurative language, interpret poetic lines, apply understanding of genre types to make distinctions among them, explain effects of sensory details, and recognize the similarities of sounds in words and rhythmic patterns in poems. |

TABLE B1 (CONTINUED)

**Performance-level descriptors for the District of Columbia Comprehensive Assessment System in reading, by grade**

| Grade | Below basic | Basic | Proficient | Advanced |
|---|---|---|---|---|
| 5 | Students are able to use vocabulary skills, such as identifying the meanings of words with multiple meanings in a simple text. Students are able to read some grade 5 informational and literary texts and can match pictures to corresponding text; complete a simple outline of key events; identify sources of information on a topic; identify cause and effect, main ideas, important details, and author's purpose in a simple text; make simple predictions based on text; and identify changes in characters in a story. | Students are able to use vocabulary skills, such as using context clues to determine meanings of multiple-meaning words and simple idiomatic expressions. Students are able to read some grade 5 informational and literary texts and can identify topic and main ideas, determine author's purpose for writing a simple persuasive text, explain minimally a conflict in a narrative, and interpret simple figurative language. | Students are able to use vocabulary skills, such as using context clues and examples to determine implied meanings of words and identifying synonyms, antonyms, and homophones for words in context. Students are able to read grade 5 informational and literary texts and can restate key points, determine an author's purpose and position and then extend understanding beyond text, determine most important and implied main ideas, paraphrase key ideas, explain implied comparisons, identify components of a narrative, analyze characters and their relationships with each other, interpret comparisons and some figurative language, summarize events, and analyze the effects of sounds and words to uncover meaning in poems. | Students are able to use vocabulary skills, such as using stated or implied examples to determine meanings of words, applying meanings of words to characters, identifying antonyms, and identifying meanings of common Greek and Latin roots and affixes to determine meanings of new words. Students are able to read grade 5 informational and literary texts and can identify the effect and purpose of descriptive details, paraphrase key points of a persuasive text, and explain fully with details from a text the important events of the narrative and how a conflict is resolved. |
| 6 | Students are able to use vocabulary skills, such as defining multiple meanings in a simple text and using dictionary skills. Students are able to read some grade 6 informational and literary texts and can identify main ideas, some organizational structures, and text features in simple text; make simple inferences; describe characters with simple adjectives; identify the main focus, theme, and some narrative elements in a simple text; restate some events in a narrative; use stated details to support a given idea; and determine character motivation in a simple narrative. | Students are able to use vocabulary skills, such as using context clues to determine meanings of simple, compound words and phrases and using dictionary skills to determine meanings and forms of words. Students are able to read some grade 6 informational and literary texts and can identify details that support a main idea, most organizational structures, and most text features in informational and procedural texts; summarize parts of an informational text and a simple narrative; determine text purpose; identify the effect of a setting in a narrative; and identify some characteristics of forms of prose (for example, short story, novel). | Students are able to use vocabulary skills, such as using dictionaries and context clues to define words, using knowledge of multiple-meaning words to understand text, and applying knowledge of affixes to determine meanings of complex words. Students are able to read grade 6 complex informational and literary texts and can identify author's purpose and supporting evidence, use organizational structures to make meaning of text, interpret comparisons and figurative language in most genres, make predictions based on information in texts, analyze documents and procedural text, explain character motivation, analyze relevance of setting to mood and tone, identify characteristics of forms of prose (for example, novella, essay), and determine an implied theme in a narrative. | Students are able to use vocabulary skills, such as using dictionaries and context clues to determine meanings of complex words and phrases in a variety of texts and using root words and affixes to understand unknown words in complex texts. Students are able to read grade 6 complex informational and literary texts and can analyze author's purpose and supporting evidence; use and analyze diverse organizational structures to locate information; interpret and paraphrase information; interpret subtle language; analyze relevance of setting to the events and mood of a narrative; and use stated words, actions, and descriptions of characters to determine their feelings and relationships to other characters. |

(CONTINUED)

TABLE B1 (CONTINUED)

**Performance-level descriptors for the District of Columbia Comprehensive Assessment System in reading, by grade**

| Grade | Below basic | Basic | Proficient | Advanced |
|---|---|---|---|---|
| 7 | Students are able to use vocabulary skills, such as identifying synonyms of known words and using definitions of Latin roots to confirm meanings of words. Students are able to read some grade 7 informational and literary texts and can locate stated details for a specific purpose; identify textual features (for example, footnotes, subheadings), sequence of events, sensory details, and words that describe characters' feelings and behavior; recognize how setting influences plot; interpret simple figurative language; and make simple predictions based on events and characters. | Students are able to use vocabulary skills, such as applying meaning of Latin roots to determine meanings of unfamiliar words. Students are able to read some grade 7 informational and literary texts and can identify main idea in informational text and key ideas in persuasive text, locate information that shows cause and effect, identify character changes, describe events, determine how characters create conflict, interpret figurative language as it relates to plot and character, determine omniscient point of view, and determine the effect of sensory details. | Students are able to use vocabulary skills, such as using context clues to determine meanings of idiomatic expressions, using affixes to determine meaning, and applying context clues to define words with multiple meanings. Students are able to read grade 7 complex informational and literary texts and can determine author's purpose in an unconventional text (for example, an interview), connect features of text to genre characteristics, set and confirm purposes for reading, distinguish fact from opinion and cite signal words (for example, think, believe) in a variety of texts, interpret events, analyze conflicts, identify points of view and their effects on text, make simple inferences about events and authors' purposes, and apply characteristics of genres to details in text. | Students are able to use vocabulary skills, such as interpreting idiomatic expressions, identifying synonyms and antonyms, and applying understanding of forms and functions of words in a sentence. Students are able to read grade 7 complex informational and literary texts and can provide examples of words that create tone or mood, determine organizational structure of persuasive text, analyze text to determine whether author or text purpose is achieved, summarize events in a biographical text, make inferences, evaluate narrative techniques (for example, flashback), make connections among literary elements, compare and contrast ideas in related genres, synthesize ideas to identify a story's theme, and evaluate use of sensory details and the characteristics of a variety of genres. |
| 8 | Students are able to use vocabulary skills, such as using words, simple sentence clues, and synonyms to determine meanings of words. Students are able to read some grade 8 informational and literary texts and can identify opinions, some facts and evidence to support an argument, and cause and effect relationships; draw simple conclusions based on stated information; relate literary works to their historical eras; explain how a text represents its genre; describe a character and an author's style; and make simple predictions about characters. | Students are able to use vocabulary skills, such as using words, complex sentence clues, and paragraph clues to determine meanings of new and multiple-meaning words. Students are able to read some grade 8 informational and literary texts and can restate facts and evidence, distinguish facts from opinions, respond to a set of instructions, make connections among texts, identify narrators and speakers, determine purposes for text, make comparisons of text to historical eras, describe characters and some elements of author's style, identify the effect of author's word choice, identify the conflict of a story, and use characters' words and actions to draw conclusions. | Students are able to use vocabulary skills, such as using words, sentences, and paragraph context clues, as well as affixes, to determine meanings of words. Students are able to read grade 8 complex informational and literary texts and can describe and elaborate on facts and evidence of an argument, evaluate information in a document, locate and determine purposes for inclusion of details, explain differences between two texts on the same topic, connect literature to art and history of its historical setting, analyze a character and how words create tone and mood, make predictions about characters, interpret descriptive phrases, and draw and support conclusions about characters. | Students are able to use vocabulary skills, such as determining meaning of words by using affixes, root words, context clues, a variety of synonyms and antonyms, etymology clues and recognizing idioms. Students are able to read grade 8 complex informational and literary texts and can support an argument with facts and evidence; evaluate the adequacy of details to achieve a purpose; make inferences; use text features (for example, footnotes and sidebars) to support understanding of text; compare literary works to art and history of their settings as well as to other literary works; interpret character traits and motivations; and draw conclusions about style, mood, tone, and meaning based on figurative language and author's word choice. |

TABLE B1 (CONTINUED)
**Performance-level descriptors for the District of Columbia Comprehensive Assessment System in reading, by grade**

| Grade | Below basic | Basic | Proficient | Advanced |
|---|---|---|---|---|
| 10 | Students are able to use vocabulary skills, such as determining meanings of words when given specific context. Students are able to read some grade 10 informational and literary texts and can demonstrate a minimal understanding of main idea and details that support it, identify author's stated purpose, draw conclusions based on literal reading of text, identify differences among explicitly stated details, paraphrase a statement, summarize a simple narrative, identify the relationship between character and setting, and identify a stated detail in a poem for a specific purpose. | Students are able to use vocabulary skills, such as using context clues to determine meanings of words and interpreting figurative language that uses simple, familiar words. Students are able to read some grade 10 informational and literary texts and can identify the main idea and author's purpose, draw conclusions based on stated details, make simple inferences, identify relationships among stated ideas, summarize a narrative poem, identify character traits and motivation, make simple predictions about characters, draw conclusions about how a character resolves a conflict, and make connections between real life and characters in texts. | Students are able to use vocabulary skills, such as using context and grammar clues to determine definitions of multiple-meaning words and distinguishing between literal and implied meanings of words. Students are able to read grade 10 complex informational and literary texts and can identify details that support a main idea, draw and support conclusions based on text, identify and explain author's purpose, make and support inferences, respond to clarifying questions about text, analyze subtly stated relationships among ideas, identify and explain author's use of literary devices, explain how author's word choice illustrates an idea or concept, and determine how point of view and language affect reader interpretation of text. | Students are able to use vocabulary skills, such as determining meaning of words in challenging texts (for example, poetry, allegory) by using context clues, analytic deduction, and prior knowledge. Students are able to read grade 10 complex informational and literary texts and can analyze and cite text elements that support a main idea, explain author's implied purpose, synthesize concepts across text, analyze interrelationships among concepts and ideas, interpret subtle statements made by characters, analyze the theme and meaning of a literary text, interpret figurative language, and explain the implied motivations of characters. |

*Source:* District of Columbia Office of the State Superintendent of Education 2010a.

TABLE B2
**Performance-level descriptors for the District of Columbia Comprehensive Assessment System in math, by grade**

| Grade | Below basic | Basic | Proficient | Advanced |
|---|---|---|---|---|
| 3 | Students may be able to show an understanding of the values of digits; identify and represent fractions as parts of whole units or collections; determine the value of variables in simple equations using addition, subtraction, and multiplication; determine whether a shape has been flipped, turned, or slid to maintain its measurements; and record some outcomes for simple events (for example, tossing of coins). | Students perform computations of addition and subtraction with whole numbers up to five digits; show the understanding of the number system by reading, writing, or modeling to at least 10,000; show an understanding of the value of digits; identify and represent fractions as parts of whole units or collections; extend patterns with addition or subtraction; solve equations using addition, subtraction, or multiplication; perform appropriate numeric operations in correct sequence; use strategies to solve real-world problems; identify and extend simple patterns; evaluate simple expressions; and use scale drawings to represent data and solve measurement problems in one or two dimensions for which the solution is easily recognized and straightforward. | Students perform computations with whole numbers and fractions; perform operations on numbers in correct sequence; create and use simple expressions to solve real-world problems; identify and extend patterns; solve simple one-step equations; use place value concepts to apply basic measurement and geometry concepts to describe shapes or objects; use informal reasoning to make appropriate decisions about how to solve problems; and use mathematical language to communicate their thinking and solutions in a clear manner. | Students perform computations with whole numbers and fractions; perform operations on numbers and parenthetical expressions in correct sequence; create and use simple expressions to model real-world problems; identify and extend patterns; solve one-step equations; use ordered pairs of numbers to graph, locate, and identify points and describe a location on a grid; compute elapsed time; carry out simple conversions within a system of measurement; compare and analyze features of two- and three-dimensional shapes; list and count the number of possible combinations of objects from a given set; find the area and perimeter of given common shapes; and use mathematical language to communicate their thinking and solutions in a clear manner. |
| 4 | Students may be able to perform computations with whole numbers and fractions; perform appropriate numeric operations, not always in correct sequence; partially solve real-world problems; identify simple patterns; identify different types of angles; use scale drawings to represent data; and use tools to determine measurements. | Students perform computations with whole numbers and fractions; perform appropriate numeric operations in correct sequence; use strategies to solve real-world problems; identify and extend simple patterns; evaluate simple expressions; identify and measure different types of angles; use scale drawings to represent data; and solve measurement problems in one or two dimensions for which the solution is easily recognized and straightforward. | Students perform computations with whole numbers, fractions, and decimals (involving money); perform operations on numbers in correct sequence; create and use simple expressions to solve real-world problems; identify and extend patterns; solve simple one-step equations; use properties of lines, triangles, and rectangles to identify and determine angles in figures not drawn to scale; and use scale drawings and histograms to represent data and solve simple measurement problems. | Students perform computations with whole numbers, fractions, and decimals (involving money); perform operations on numbers and parenthetical expressions in correct sequence; create and use simple expressions to model real-world problems; identify and extend patterns; solve one-step equations; use ordered pairs of numbers to graph, locate, and identify points and describe a location on a grid; compute elapsed time; carry out simple conversions within a system of measurement; compare and analyze features of two- and three-dimensional shapes; and list and count the number of possible combinations of objects from a given set. |

(CONTINUED)

TABLE B2 (CONTINUED)

**Performance-level descriptors for the District of Columbia Comprehensive Assessment System in math, by grade**

| Grade | Below basic | Basic | Proficient | Advanced |
|---|---|---|---|---|
| 5 | Students may be able to perform computations with whole numbers and fractions; perform appropriate numeric operations, not always in correct sequence; partially solve real-world problems; identify simple patterns; identify different types of angles; use scale drawings to represent data; use tools to determine measurements; determine lowest common multiples and greatest common factors; and extend a given pattern. | Students perform computations with whole numbers and fractions; perform appropriate numeric operations in correct sequence; use strategies to solve real-world problems; identify and extend simple patterns; evaluate simple expressions; identify and measure different types of angles; know the total measurement of the angles inside a triangle and a quadrilateral; find the mean (average) of a given set of numbers; use scale drawings to represent data and solve measurement problems in one or two dimensions for which the solution is easily recognized and straightforward; and use mathematical language to communicate their thinking and solutions in a clear manner. | Students perform computations with whole numbers, fractions, and decimals (involving money); perform operations on numbers in correct sequence; create and use simple expressions to solve real-world problems; identify and extend patterns; solve simple one-step equations; use properties of lines, triangles, and rectangles to identify and determine angles in figures not drawn to scale; use scale drawings and histograms to represent data and solve simple measurement problems; and use mathematical language to communicate their thinking and solutions in a clear manner. | Students perform computations with whole numbers, fractions, and decimals (involving money); perform operations on numbers and parenthetical expressions in correct sequence; create and use simple expressions to model real-world problems; identify and extend patterns; solve one-step equations; use ordered pairs of numbers to graph, locate, and identify points and describe a location on a grid; compute elapsed time; carry out simple conversions within a system of measurement; compare and analyze features of two- and three-dimensional shapes; list and count the number of possible combinations of objects from a given set; predict the outcomes of simple experiments; solve problems involving proportional relationships; and use mathematical language to communicate their thinking and solutions in a clear manner. |
| 6 | Students may be able to perform computations and solve simple word problems with whole numbers and determine appropriate units of measurements for length, volume, time, and weight or mass. | Students perform computations and solve simple word problems involving multiplication or division with money, find the area and perimeter of regular shapes on a Cartesian plane, interpret data from a graph, and identify a spinner that represents a fair game. | Students apply order of operations to numeric and algebraic expressions, convert between different numerical representations, construct a graph, identify an expression for the graph and use the graph to make predictions, determine the missing angle on a triangle, and calculate simple probabilities. | Students identify and interpret solutions to word problems, including linear equations; match three-dimensional objects with their two-dimensional representations and estimate the area of an irregular shape of a grid; compute the probability of an event; and compare the mode and range of a given set of data. |

*(CONTINUED)*

TABLE B2 (CONTINUED)

**Performance-level descriptors for the District of Columbia Comprehensive Assessment System in math, by grade**

| Grade | Below basic | Basic | Proficient | Advanced |
|---|---|---|---|---|
| 7 | Students may be able to perform computations that apply the order of operations involving powers; know the meaning of square roots; convert between repeating decimals and fractions; know how to find the prime factorization of a given number; solve problems with rational numbers and negative integers; perform appropriate numeric operations, not always in correct sequence; partially solve real-world problems; identify simple patterns; identify different types of angles; use scale drawings to represent data and use tools to determine measurements; determine lowest common multiples and greatest common factors; and extend a given pattern. | Students perform computations with whole numbers and fractions; perform appropriate numeric operations in correct sequence; use strategies to solve real-world problems; identify and extend simple patterns; evaluate simple expressions; identify and measure different types of angles; know the total measurement of the angles inside a triangle and a quadrilateral; find and understand the mean (average), median (middle), mode, and range of a given set of numbers; use scale drawings to represent data and solve measurement problems in one or two dimensions for which the solution is easily recognized and straightforward; use and apply algebraic terminology correctly; and use mathematical language to communicate their thinking and solutions in a clear manner. | Students perform computations with whole numbers, fractions, and decimals (involving money); perform operations on numbers in correct sequence; create and use simple expressions to solve real-world problems; identify and extend patterns; write and solve simple two-step equations; understand and use coordinate graphs to plot simple figures; use properties of lines, triangles, and rectangles to identify and determine angles in figures not drawn to scale; identify three-dimensional figures by their physical appearance; identify and analyze linear relationships between two variables; demonstrate an understanding of how to apply formulas to find measurement of different geometric shapes; select, create, interpret, and use different graphical representations of data; and use mathematical language to communicate their thinking and solutions in a clear manner. | Students perform computations with whole numbers, fractions, and decimals (involving money); perform operations on numbers and parenthetical expressions in correct sequence; create and use simple expressions to model real-world problems; identify and extend patterns; write and solve two-step equations; use ordered pairs of numbers to graph, locate, and identify points and describe a location on a grid; construct and read drawings or models made to scale; demonstrate an understanding of how to apply formulas to find measurement of different geometric shapes; carry out simple conversions within a system of measurement; compare and analyze features of two- and three-dimensional shapes; list and count the number of possible combinations of objects from a given set; predict the outcomes of simple experiments; select, create, interpret, and use different graphical representations of data; solve problems involving proportional relationships; and use mathematical language to communicate their thinking and solutions in a clear manner. |

TABLE B2 (CONTINUED)
**Performance-level descriptors for the District of Columbia Comprehensive Assessment System in math, by grade**

| Grade | Below basic | Basic | Proficient | Advanced |
|---|---|---|---|---|
| 8 | Students may be able to perform computations with decimals; perform appropriate numeric operations, not always in correct sequence; partially solve real-world problems; identify simple patterns; identify different types of angles; use scale drawings to represent data; and use tools to determine measurements. | Students perform computations with decimals; perform appropriate numeric operations in correct sequence; use strategies to solve real-world problems; identify and extend simple patterns; evaluate simple expressions; identify and measure different types of angles; and use scale drawings to represent data and solve measurement problems in one or two dimensions for which the solution is easily recognized and straightforward. | Students perform computations with decimals and rational numbers; perform operations on numbers in correct sequence; create and use simple expressions to solve real-world problems; identify and extend patterns; solve simple one-step equations; use properties of lines, triangles, and rectangles to identify and determine angles in figures not drawn to scale; and use scale drawings and histograms to represent data and solve simple measurement problems. | Students perform computations with decimals and rational numbers; perform operations on numbers and parenthetical expressions in correct sequence; create and use simple expressions to model real-world problems; identify and extend patterns; solve one-step equations; use properties of lines, triangles, rectangles, and other polygons to identify and determine angles in figures not drawn to scale; and use scale drawings and histograms to represent data and solve measurement problems. |
| 10 | Students may be able to perform computations with decimals; perform appropriate numeric operations, not always in correct sequence; apply linear formulas to partially solve real-world problems; identify simple patterns; identify different types of angles; use scale drawings to represent data; use tools to determine measurements. | Students perform computations with decimals and rational numbers having common denominators; perform appropriate numeric operations in correct sequence; apply linear formulas to solve real-world problems; identify and extend simple patterns; evaluate simple expressions; solve simple (one-step) equations; identify and measure different types of angles; and use scale drawings to represent data and solve measurement problems in one or two dimensions for which the solution is easily recognized and straightforward. | Students perform computations with decimals and unrestricted rational numbers; perform operations on numbers and variables in correct sequence; create and apply linear formulas to solve real-world problems; identify and extend patterns; evaluate expressions requiring ordered operations; solve linear equations that may require multiple steps; use properties of parallel lines, plain polygons, and transversals to identify and determine angles in figures not drawn to scale; and use graphs, scale drawings, and histograms to represent data and solve measurement problems in one, two, or three dimensions. | Students perform computations with real numbers (decimals, unrestricted rational numbers, and surds); perform operations on numbers and variables in correct sequence; create and apply linear and nonlinear formulas to solve real-world problems; identify, extend, and interpolate patterns; evaluate expressions requiring ordered and embedded operations; use a variety of methods to solve linear, nonlinear, and simultaneous equations; use properties of parallel lines, plain polygons, and transversals to identify and determine angles and measures of unknown sides in figures not drawn to scale; and use graphs, properties of graphs, scale drawings, and histograms to represent data and solve measurement problems in one, two, or three dimensions where unit conversion is required. |

*Source:* District of Columbia Office of the State Superintendent of Education 2010a.

## APPENDIX C
## SCORE RANGES OF THE DISTRICT OF COLUMBIA COMPREHENSIVE ASSESSMENT SYSTEM

This appendix provides information on the score ranges used to categorize student achievement into proficient and advanced levels on the District of Columbia Comprehensive Assessment System.

TABLE C1

**District of Columbia Comprehensive Assessment System reading score ranges, by grade**

| Grade | Below basic | | Basic | | Proficient | | Advanced | |
|---|---|---|---|---|---|---|---|---|
| | Minimum | Maximum | Minimum | Maximum | Minimum | Maximum | Minimum | Maximum |
| 3 | 300 | 338 | 339 | 353 | 354 | 372 | 373 | 438 |
| 4 | 400 | 438 | 439 | 454 | 455 | 471 | 472 | 499 |
| 5 | 500 | 539 | 540 | 555 | 556 | 572 | 573 | 599 |
| 6 | 600 | 639 | 640 | 654 | 655 | 671 | 672 | 699 |
| 7 | 700 | 738 | 739 | 755 | 756 | 767 | 768 | 799 |
| 8 | 800 | 839 | 840 | 855 | 856 | 869 | 870 | 899 |
| 10 | 900 | 939 | 940 | 955 | 956 | 969 | 970 | 999 |

*Source:* District of Columbia Office of the State Superintendent of Education 2010b.

TABLE C2

**District of Columbia Comprehensive Assessment System math score ranges, by grade**

| Grade | Below basic | | Basic | | Proficient | | Advanced | |
|---|---|---|---|---|---|---|---|---|
| | Minimum | Maximum | Minimum | Maximum | Minimum | Maximum | Minimum | Maximum |
| 3 | 300 | 339 | 340 | 359 | 360 | 375 | 376 | 399 |
| 4 | 400 | 442 | 443 | 457 | 458 | 473 | 474 | 499 |
| 5 | 500 | 542 | 543 | 559 | 560 | 574 | 575 | 599 |
| 6 | 600 | 635 | 636 | 653 | 654 | 667 | 668 | 699 |
| 7 | 700 | 735 | 736 | 751 | 752 | 769 | 770 | 799 |
| 8 | 800 | 835 | 836 | 849 | 850 | 867 | 868 | 899 |
| 10 | 900 | 932 | 933 | 950 | 951 | 970 | 971 | 999 |

*Source:* District of Columbia Office of the State Superintendent of Education 2010b.

**APPENDIX D**
**PERCENTAGE OF STUDENTS SCORING AT THE PROFICIENT OR ADVANCED LEVEL IN THE DISTRICT OF COLUMBIA'S ASSESSMENT PROGRAM**

This appendix provides information on the percentage of students scoring at the proficient or advanced level on the District of Columbia Comprehensive Assessment System.

TABLE D1
**Percentage of students scoring at the proficient or advanced level on the grade 3 District of Columbia Comprehensive Assessment System, by subject and English language learner status, 2006/07–2008/09**

| Subject and English language learner status | 2006/07 | 2007/08 | 2008/09 |
|---|---|---|---|
| Reading | | | |
| Non-ELL | 41.6 | 47.7 | 45.9 |
| ELL | 46.2 | 48.4 | 51.0 |
| Math | | | |
| Non-ELL | 29.1 | 37.1 | 41.8 |
| ELL | 38.7 | 39.3 | 53.5 |

ELL is English language learner.

*Source:* District of Columbia Office of the State Superintendent of Education 2009c.

TABLE D2
**Percentage of students scoring at the proficient or advanced level on the grade 4 District of Columbia Comprehensive Assessment System, by subject and English language learner status, 2006/07–2008/09**

| Subject and English language learner status | 2006/07 | 2007/08 | 2008/09 |
|---|---|---|---|
| Reading | | | |
| Non-ELL | 37.0 | 46.5 | 45.0 |
| ELL | 42.9 | 46.4 | 44.8 |
| Math | | | |
| Non-ELL | 34.4 | 45.6 | 48.4 |
| ELL | 41.6 | 56.4 | 58.6 |

ELL is English language learner.

*Source:* District of Columbia Office of the State Superintendent of Education 2009c.

TABLE D3
**Percentage of students scoring at the proficient or advanced level on the grade 5 District of Columbia Comprehensive Assessment System, by subject and English language learner status, 2006/07–2008/09**

| Subject and English language learner status | 2006/07 | 2007/08 | 2008/09 |
|---|---|---|---|
| Reading | | | |
| Non-ELL | 37.7 | 45.5 | 45.7 |
| ELL | 31.1 | 43.6 | 45.7 |
| Math | | | |
| Non-ELL | 29.4 | 42.3 | 43.6 |
| ELL | 28.9 | 40.6 | 49.9 |

ELL is English language learner.

*Source:* District of Columbia Office of the State Superintendent of Education 2009c.

TABLE D4
**Percentage of students scoring at the proficient or advanced level on the grade 6 District of Columbia Comprehensive Assessment System, by subject and English language learner status, 2006/07–2008/09**

| Subject and English language learner status | 2006/07 | 2007/08 | 2008/09 |
|---|---|---|---|
| Reading | | | |
| Non-ELL | 43.0 | 42.8 | 52.0 |
| ELL | 32.4 | 34.7 | 52.5 |
| Math | | | |
| Non-ELL | 31.9 | 38.5 | 43.8 |
| ELL | 29.7 | 34.3 | 46.4 |

ELL is English language learner.

*Source:* District of Columbia Office of the State Superintendent of Education 2009c.

TABLE D5

**Percentage of students scoring at the proficient or advanced level on the grade 7 District of Columbia Comprehensive Assessment System, by subject and English language learner status, 2006/07–2008/09**

| Subject and English language learner status | 2006/07 | 2007/08 | 2008/09 |
|---|---|---|---|
| Reading | | | |
| Non-ELL | 34.0 | 41.3 | 43.1 |
| ELL | 16.7 | 28.4 | 29.4 |
| Math | | | |
| Non-ELL | 31.7 | 39.8 | 48.6 |
| ELL | 19.9 | 38.1 | 43.9 |

ELL is English language learner.

*Source:* District of Columbia Office of the State Superintendent of Education 2009c.

TABLE D6

**Percentage of students scoring at the proficient or advanced level on the grade 8 District of Columbia Comprehensive Assessment System, by subject and English language learner status, 2006/07–2008/09**

| Subject and English language learner status | 2006/07 | 2007/08 | 2008/09 |
|---|---|---|---|
| Reading | | | |
| Non-ELL | 32.2 | 40.6 | 45.9 |
| ELL | 20.7 | 21.3 | 32.5 |
| Math | | | |
| Non-ELL | 32.9 | 39.4 | 42.1 |
| ELL | 26.2 | 33.1 | 46.3 |

ELL is English language learner.

*Source:* District of Columbia Office of the State Superintendent of Education 2009c.

TABLE D7

**Percentage of students scoring at the proficient or advanced level on the grade 10 District of Columbia Comprehensive Assessment System, by subject and English language learner status, 2006/07–2008/09**

| Subject and English language learner status | 2006/07 | 2007/08 | 2008/09 |
|---|---|---|---|
| Reading | | | |
| Non-ELL | 32.3 | 39.4 | 39.5 |
| ELL | 17.9 | 25.5 | 38.4 |
| Math | | | |
| Non-ELL | 28.7 | 35.2 | 38.7 |
| ELL | 26.8 | 45.0 | 48.4 |

ELL is English language learner.

*Source:* District of Columbia Office of the State Superintendent of Education 2009c.

## NOTES

1.  Students whose first language is not English and who are in the process of learning English are referred to using different terms across the United States, such as English language learner (ELL) or limited English proficient (LEP) students. The authors refer to such students as ELL students in the present report to remain consistent with District of Columbia terminology.

2.  The request came to *Ask A REL,* which is a collaborative reference desk service of the 10 Regional Educational Laboratories that provides references, referrals, and brief responses in the form of citations on research-based education questions. More information can be found at http://ies.ed.gov/ncee/edlabs/askarel/index.asp.

3.  The reasons for the large increase in ELL student enrollment from 2002/03 to 2003/04 and large decrease in ELL student enrollment from 2003/04 to 2004/05 are unknown to the study authors.

4.  The reason for the large decrease in the percentage of ELL students speaking Spanish from 2006/07 to 2007/08 is unknown to the study authors.

5.  The reason for the large increase in the percentage of ELL students speaking "other" languages from 2006/07 to 2007/08 is unknown to the study authors.

6.  Because the District of Columbia did not administer science assessments until 2007/08, science results are not described in this report.

7.  Mean scale scores were not disaggregated by ELL status and thus are not used in the present report.

## REFERENCES

Abedi, J. (2001). *Assessment and accommodations for English Language Learners: issues and recommendations* (CRESST Policy Brief 4). Los Angeles, CA: University of California, National Center for Research on Evaluation, Standards, and Student Testing.

Abedi, J. (2002). Standardized achievement tests and English language learners: psychometrics issues. *Educational Assessment, 8*(3), 231–257.

Abedi, J., and Dietel, R. (2004). Challenges in the No Child Left Behind Act for English-language learners. *Phi Delta Kappan, 85*(10), 782–785.

Abedi, J., and Gándara, P. (2006). Performance of English language learners as a subgroup in large-scale assessment: interaction of research and policy. *Educational Measurement: Issues and Practices*, *26*(5), 36–46.

Abedi, J., and Herman, J. L. (2010). Assessing English language learners' opportunity to learn mathematics: Issues and limitations. *Teacher's College Record, 112*(3), 723–746.

Abedi, J., Leon, S., and Mirocha, J. (2003). *Impact of student language background on content-based performance: analyses of extant data* (CSE Report 603). Los Angeles, CA: University of California, National Center for Research on Evaluation, Standards, and Student Testing.

American Educational Research Association, American Psychological Association, and National Council on Measurement in Education. (1999). *Standards for educational and psychological testing*. Washington, DC: American Psychological Association.

Aud, S., Hussar, W., Planty, M., Snyder, T., Bianco, K., Fox, M., Frohlich, L., Kemp, J., and Drake, L. (2010). *The condition of education 2010* (NCES 2010-028). U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. Washington, DC.

Beal, C. R., Adams, N., and Cohen, P. R. (2010). Reading proficiency and mathematics problem solving by high school English Language Learners. *Urban Education, 44*, 58–74.

District of Columbia Office of the State Superintendent of Education. (2009a). *Annual public school enrollment audit reports (2002–2008)*. Retrieved December 3, 2009, from http://osse.dc.gov/seo/cwp/view,a,1222, q,552345,seoNav,|31195|.asp.

District of Columbia Office of the State Superintendent of Education. (2009b). *DC CAS accommodations study*. Washington, DC.

District of Columbia Office of the State Superintendent of Education. (2009c). *District of Columbia assessment and accountability data reports (2007–2009)*. Retrieved December 3, 2009, from www.nclb.osse.dc.gov/ reportcards.asp?prev=y.

District of Columbia Office of the State Superintendent of Education. (2010a). *DC CAS performance level descriptors*. Retrieved September 20, 2010, from http://osse. dc.gov/service/dc-cas-performance-level-descriptors.

District of Columbia Office of the State Superintendent of Education. (2010b). *District of Columbia Office of the State Superintendent of Education testing accommodations manual for students with disabilities and English language learners*. Retrieved September 20, 2010, from http://osse.dc.gov/sites/default/files/dc/ sites/osse/publication/attachments/DC_Testing_ Accommodations_Manual.pdf.

Durán, R.P. (2008). Assessing English-language learners' achievement. *Review of Research in Education, 32*, 292–327.

Flannery, M.E. (2009). A new look at America's English language learners [Electronic version]. *NEA Today* (2009, January). Retrieved March 18, 2009, from www. nea.org/home/29160.htm.

Fry, R. (2007). *How far behind in math and reading are English language learners?* Washington, DC: Pew Hispanic Center. Retrieved May 21, 2011, from http:// pewhispanic.org/files/reports/76.pdf.

Gándara, P., Rumberger, R., Maxwell-Jolly, J., and Callahan, R. (2003). *English learners in California schools: unequal resources, unequal outcomes. Educational Policy*

*Analysis Archives*, *11.* Retrieved July 15, 2010, from http://epaa.asu.edu/ojs/article/viewFile/264/390.

Garcia-Vazquez, E., Vazquez, L. A., Lopez, I. C., and Ward, W. (1997). Language proficiency and academic success: relationships between proficiency in two languages and achievement among Mexican American students. *Bilingual Research Journal, 21*(4), 334–347.

Genesee, F., Lindholm-Leary, K., Saunders, W., and Christian, D. (2005). English language learners in U.S. schools: an overview of research findings. *Journal of Education for Students Placed at Risk, 10*(4), 363–385.

Migration Policy Institute (MPI). (2010). MPI data hub: migration facts, stats, and maps. States ranked by number of foreign born: 1990, 2000, 2007, 2008. Washington, DC. Retrieved May 26, 2010, from www.migrationinformation.org/datahub/files/MPIDataHub_ACS_2008-NumberForeignBorn.xls.

National Clearinghouse for English Language Acquisition and Language Instruction Educational Programs (NCELA). (2011). *The growing numbers of English learner students: 1998/99–2008/09.* Washington, DC. Retrieved August 19, 2011, from www.ncela.gwu.edu/files/uploads/9/growingLEP_0809.pdf.

No Child Left Behind Act of 2001, Pub. L. No. 107-110. (2001). Retrieved December 15, 2008, from http://www2.ed.gov/policy/elsec/leg/esea02/107-110.pdf.

No Child Left Behind (NCLB) Glossary. (2001). Retrieved May 14, 2011, from http://www2.ed.gov/nclb/index/az/glossary.html?src=az#2.

Rhode Island KIDS COUNT. (2011). *2011 Rhode Island Kids Count factbook: English Language Learners indicator.* Retrieved May 21, 2011, from www.rikidscount.org/matriarch/documents/11_Factbook_Indicator_52.pdf.

Secretary of the District of Columbia. (2002). *District of Columbia municipal regulations: Title 5-education.* Chapter 31. Retrieved December 3, 2009, from http://os.dc.gov/os/frames.asp?doc=/os/lib/os/info/odai/title_5/31.pdf.

Shin, H.B., and Bruno, R. (2003). *Language use and English-speaking ability: 2000.* Washington, DC: U.S. Census Bureau. Retrieved July 30, 2010, from www.census.gov/prod/2003pubs/c2kbr-29.pdf.

Shin, H.B., and Kominski, R.A. (2010). *Language use in the United States: 2007, American Community Survey reports, ACS-12.* Washington, DC: U.S. Census Bureau. Retrieved August 19, 2011, from www.census.gov/prod/2010pubs/acs-12.pdf.

Solano-Flores, G., and Trumbull, E. (2003). Examining language in context: the need for new research and practice paradigms in the testing of English-language learners. *Educational Researcher, 32*(2), 3–13.

Strickland, D. S., and Alvermann, D. E. (2004). *Bridging the literacy achievement gap grades 4-12.* New York, NY: Teacher's College Press.

U.S. Department of Education. (2006). *Consolidated state performance report SY 2005−06: District of Columbia.* Retrieved March 21, 2011, from http://www2.ed.gov/admins/lead/account/consolidated/sy05-06/dc.pdf.

U.S. Department of Education. (2007). *Consolidated state performance report SY 2006−07: District of Columbia.* Retrieved March 21, 2011, from http://www2.ed.gov/admins/lead/account/consolidated/sy06-07part1/dc.pdf.

U.S. Department of Education. (2008). *Consolidated state performance report SY 2007−08: District of Columbia.* Retrieved March 21, 2011, from http://www2.ed.gov/admins/lead/account/consolidated/sy07-08part1/dc.pdf.

U.S. Department of Education. (2009). *Consolidated state performance report SY 2008−09: District of Columbia.* Retrieved March 21, 2011, from http://www2.ed.gov/admins/lead/account/consolidated/sy08-09part1/dc.pdf.

U.S. Department of Education, National Center for Education Statistics (NCES). (2010). *The nation's report card: 2009 reading and mathematics results.* Washington, DC: U.S. Department of Education. Retrieved May 26, 2010, from http://nationsreportcard.gov/.

U.S. Department of Homeland Security. (2010). *Yearbook of immigration statistics: 2009.* Washington, DC: U.S. Department of Homeland Security. Retrieved May 26, 2010, from www.dhs.gov/files/statistics/publications/yearbook.shtm.

Wolf, M. K., Herman, J. L., Kim, J., Abedi, J., Leon, S., Griffin, N., Bachman, P. L., Chang, S. M., Farnsworth, T.,

Jung, H., Nollner, J., and Shin, H. W. (2008). *Providing validity evidence to improve the assessment of English language learners* (CSE Technical Report 738). Los Angeles, CA: University of California, National Center for Research on Evaluation, Standards, and Student Testing.